COUNTWAY LIBRARY
HC 3IZJ B

BOSTON
MEDICAL LIBRARY
8 THE FENWAY

Digitized by the Internet Archive
in 2016

https://archive.org/details/journalofmedica1819medi_0

The Journal of The Medical Association of Georgia

INDEX

Volume XVIII

January-December, 1929

27007

PUBLICATION COMMITTEE
E. C. Thrash, M.D., Chairman
A. S. M. Coleman, M.D.
M. M. Head, M.D.

EDITOR
Allen H. Bunce, M.D.

ASSOCIATE EDITORS
Evert A. Bancker, Jr., M.D.
L. Minor Blackford, M.D.
Mark S. Dougherty, M.D.
Joseph C. Massee, M.D.

BUSINESS MANAGER
H. L. Rowe.

BOSTON MEDICAL LIBRARY MAY - 9 1931

SUBJECT INDEX

CATALOGUED MAY 9 1931 B.B.

A

ABDOMINAL PAIN
(Samuel J. Sinkoe) p. 36, Jan., 1929.

ADDRESS
President's, (Dan M. Carter) p. 423, Sept., 1929.
Of President-Elect (William R. Dancy) p. 204, May, 1929.
Before the Twelfth District Medical Society (William R. Dancy) p. 286, July, 1929.
Before the Woman's Auxiliary (William R. Dancy) p. 211, May, 1929.
Delivering "Badge of Service" to President, Dr. C. K. Sharp (J. A. Redfearn) p. 556, Dec., 1929.
Presidential (C. K. Sharp) p. 187, May, 1929.

AGRANULOCYTOSIS
Report of Two Cases (J. D. Gray) p. 485, Oct., 1929.

ALLERGIC REACTION
In Children with Special Reference to Digestive Disorders (Lee Bivings) p. 369, Aug., 1929.

ALLERGIC REACTIONS
(Lee Bivings) p. 247, June, 1929.

A. M. A.
House of Delegates—Abstract of the Proceedings at the Portland Session, p. 416, Sept., 1929.

ANEMIA
Pernicious-Clinic (T. E. Rogers) p. 348, Aug., 1929.

ANESTHESIA
Spinal Anesthesia in Obstetrics (J. W. Thurmond) p. 140, April, 1929.
Spinal Anesthesia in Obstetrics (Lewis H. Wright) p. 362, Aug., 1929.
Spinal—Use of Spinocain in 100 Cases (G. W. Fuller) p. 358, Aug., 1929.

ANESTHETIC
The Choice of an (C. H. Richardson, Jr.) p. 105, March, 1929.

ARTHRITIS DEFORMANS
Diagnosis, Treatment and Rehabilitation (William S. Baer) p. 393, Sept., 1929.

ASSOCIATION
To the Members of the (William R. Dancy) p. 432, Sept., 1929.
Why I Belong to My Profession, (Arthur D. Little) p. 422, Sept., 1929.

ASTHMA IN CHILDREN
(Hal M. Davison) p. 122, March, 1929.

ATELECTASIS
Postoperative Pulmonary—Clinic (C. H. Richardson, Jr.) p. 355, Aug., 1929.

B

BLOOD CREATININ
(Maurice Lee Ben Clarke) p. 34, Jan., 1929.

BONES
The Sesamoid Bones, Important Factors in Deformaties of the First Metatarsophalangeal Joint (Theodore Toepel) p. 499, Nov., 1929.

BUILDING
Centennial Memorial, University of Georgia Medical Department, p. 3, Jan., 1929.

C

CALHOUN
Dr. deSchweinitz's Tribute to Dr. Abner Calhoun (G. E. deSchweinitz) p. 50, Feb., 1929.

CANCER
Of the Uterine Cervix (John F. Denton) p. 24, Jan., 1929.

CARCINOMA
Of the Cervix Uteri (Calvin B. Stewart) p. 27, Jan., 1929.

CELL EVOLUTION
(J. L. Campbell) p. 108, March, 1929.

CERVICAL LYMPH NODES
Enlargement of the (D. C. Elkin) p. 378, Aug., 1929.

CHOREA
A Dangerous Complication of Pregnancy (John A. Hunnicutt) p. 23, Jan., 1929.

CIRCUMCISION
Routine Circumcision at Birth (Thomas Bolling Gay) p. 218, May, 1929.

CLINICS FOR CHILDREN
Of the Pre-School Age in Atlanta (Lewis D. Hoppe) p. 410, Sept., 1929.

COLITIS
Acriflavine as an Injection in (W. L. Wilkinson) p. 84, Feb., 1929.

CONSTITUTION AND BY-LAWS
Article I.—Name of the Association 170
Article II.—Purposes of the Association 170
Article III.—Component Societies 170
Article IV.—Composition of the Association 170
Article V.—House of Delegates 170
Article VI.—Council 171
Article VII.—Sessions and Meetings 171
Article VIII.—Sections and District Societies 171
Article IX.—Officers 171
Article X.—Funds and Expenses 171
Article XI.—Ratification 171
Article XII.—The Seal 171
Article XIII.—Amendments 173

BY-LAWS
Chapter I.—Membership 171
Chapter II.—General Meetings 172
Chapter III.—House of Delegates 172
Chapter IV.—Duties of Officers 172
Chapter V.—Council 173
Chapter VI.—Committees 174
Chapter VII.—County Societies 175
Chapter VIII.—Rules and Ettics 175
Chapter IX.—Amendments 179
Resolutions 179

COOPERATION
A Plea for Further Cooperation (Jane Van De Vrede) p. 280, Aug., 1929.

CYSTS
Mesenteric Cysts with Intestinal Obstructions (Ralph H. Chaney) p. 517, Nov., 1929.

D

DIAGNOSOS OF DISEASE OF CHILDREN
The Laboratory as an Aid in (Benjamin Bashinski) p. 251, June, 1929.

DILUTION AND CONCENTRATION TESTS
of Kidney Function (Allen H. Bunce) p. 152, April, 1929.

DOCTORS, NURSES AND THE COMMUNITY
(Allen H. Bunce) p. 559, Dec., 1929.

E

EDITORIALS
A. M. A. Attendance 126
A. M. A. Official Call 223
A. M. A. Rules for the Guidance of the Committee on Credentials 223
A. M. A. Scientific Assembly 223
A. M. A.—Scientific Assembly, Abstracts from the Constitution and By-Laws 530

American Psychiatric Association Meeting 270
Calhoun, Abner W., Lectureship 87
Capital Investment in Medicine 41
Cancer Control 124
Cancer Control—A Public Health Problem 529
Clinics and the Conservation of the Doctor 426
Clinics, Emory University 125
Clinics, Emory University 270
Constitutional Factors in Disease 484
Duty Calls 40
Edema 382
Emory Alumni Week 162
Fairhaven Tuberculosis Sanatorium 383
Gallbladder, Diagnosing the Surgical 163
Goiter, Distribution of Enemic 486
Health and Industry Conference on 126
History, Medical, of Georgia 383
Long, Crawford W., Memorial Prize 88
Long, Crawford W., Memorial Prize 125
Long, Crawford W., Memorial Prize 328
Macon Meeting and Future Development 269
Macon Session 222
Macon, Welcome to 161
Medical English 425
Medical Relief in Disaster 328-483
Nursing Schools Being Graded 328
Obligations to the Profession 485
Obstetrics, Institute for Teaching Practical Obstetrics 89
Organization, Value of 528
Partnership General Practice 485
Pharmacopeia, Revision of the U. S. 530
President's Tour to the Southern Medical Association Convention 425
Program 164
Program and Macon Meeting—Committee on Scientific Work 88
Secretaries, Annual Conference of A. M. A. 41
Testimony, Medical Expert 529
Tetany, Newer Observations on 424
Treatment of the Disease and Treatment of the Case 327
Undulant Fever, Importance of Being More Widely Recognized 42
Vacation, Where Shall We Spend Our 125

EDUCATION
The Relationship Between Premedical Education and Medical Education (Stuart Graves) p. 543, Dec., 1929.

EPILEPSIES
The (William A. Smith) p. 464, Oct., 1929.

EPILEPSY
(William A. Smith) p. 117, March, 1929.

EUROPEAN CLINICS
Observations in (Shelley C. Davis) p. 22, Jan., 1929.

F

FADS AND QUACKERY IN MEDICINE
(Morris Fishbein) p. 191, May, 1929.

FEEBLEMINDEDNESS
The Problem of (Neil A. Dayton) p. 234, June, 1929.

FEVER
The Increasing Importance of Undulant Fever (Evert A. Bancker, Jr.) p. 448, Oct., 1929.

FOOD AND AIR PASSAGES
Foreign Bodies in the Food and Air Passages (Murdock Equen) p. 9, Jan., 1929.

FUNGOIDES
Mycosis—Clinic (G. Y. Massenburg) p. 345, Aug., 1929.

G

GALLBLADDER DISEASE
Clinic (A. R. Rozar) p. 341, Aug., 1929.

GLAUCOMA
From the Viewpoint of the General Practitioner (F. Phinizy Calhoun) p. 308, July, 1929.

GLAUCOMA SIMPLEX
(Grady E. Clay and Eugene R. Vernou) p. 306, July, 1929.

GYNECOLOGICAL
Some Gynecological Problems (Marion T. Benson) p. 510, Nov., 1929.

H

HAMMERS AND MONKEY WRENCHES
(Jane Van De Vrede) p. 159, April, 1929.

HEADACHES
Concerning Headaches—Being an Essay on Certain Etiological Factors and on Distinctive Features and Their Mimicries (G. E. deSchweinitz) p. 51, Feb., 1929.

HEART
Some Homely Truths About the Heart (W. W. Jarrell) p. 207, July, 1929.

HEART CASE
Clinic (Jas. A. Fountain) p. 351, Aug., 1929.

HEART DISEASE
Organic, Concerning the Diagnosis (Edgar D. Shanks) p. 81, Feb., 1929.
The Use of Quinidine in the Treatment of (Thos. J. Charlton) p. 301, July, 1929.

HEART SEPTAL DEFECT
Clinic (W. C. Pumpelly) p. 349, Aug., 1929.

HOUSE OF DELEGATES

Reports of Officers

President 210-468
President-Elect 304-468
First Vice-President 468
Parliamentarian 468
Secretary-Treasurer 469
Council 470-480

Reports of Committees

Scientific Work 471
Arrangements 471
Medical Defense 471
Necrology 472
Health and Public Instruction 472
Cancer Commission 473
Crawford W. Long Memorial Prize 473
Hospitals 478
Auditing Committee 480

Miscellaneous

A. M. A. Delegates 473
Public Policy, Legislation or Appropriations—Resolutions 475
By-Laws—Amendment 476-487
Delegates—Fraternal 478
President-Elect, Endorsement of Policies 479
Constitution, Amendment, Article X.—Funds and Expenses 482

INDIGESTION
Chronic Indigestion—An Analysis and Classification of Its Etiological Factors (L. C. Allen) p. 69, Feby., 1929.

INFECTION
Gas Bacillus Infection—Case Report (Ben Hill Clifton) p. 143, April, 1929.

INSEMINATION
A New Mode of Artificial (G. Lombard Kelly) p. 520, Nov., 1929.

INSULIN IN MAL-NUTRITION
(J. Kenneth Fancher) p. 30, Jany., 1929.

K

KAHN AND WASSERMANN TESTS
(Paul Eaton and Fred L. Damren) p. 325, July, 1929.

KIDNEY FUNCTION
Dilution and Concentration Tests of (Allen H. Bunce) p. 152, April, 1929.

L

LUES
A Report of Six Years of the Intraperitoneal Use of Neoarsphenamin and Mercurosal in Congenital Lues (Joseph Yampolsky) p. 444, Oct., 1929.
LUMBAR PUNCTURE
(Charles E. Dowman) p. 85, Feby., 1929.

M

MALARIA
(J. W. Chambliss) p. 78, Feby., 1929.
(Jno. W. Daniel) p. 565, Dec., 1929.
MALARIA CONTROL
(C. C. Bass) p. 101, March, 1929.
MATERNITY HYGIENE PROGRAM
of Savannah and Chatham County (Daniel L. Seckinger) p. 549, Dec., 1929.
MAXILLARY SINUS
Chronic Infection of the Maxillary Sinus (William C. Warren) p. 14, Jany., 1929.
MEDICAL COLLEGE
The Evolution of (G. Lombard Kelly) p. 1, Jany., 1929.
MEDICAL DEPARTMENT
of the University of Georgia, p. 80, Feby., 1929.
of the University of Georgia (G. Lombard Kelly) p. 1, Jany., 1929.
MEDICINE
The Challenge of Industry to Present Day Medicine (C. W. Roberts) p. 317, July, 1929.
MEDICINE AND GRADUATES
American Medicine and Young Graduates (Stuart Grave) p. 288, July, 1929.
MENSTRUAL AND MENOPAUSAL
Radiotherapy in Menstrual and Menopausal Disturbances (Jackson W. Landham) p. 215, May, 1929.

N

NEUROLOGICAL DISEASES
(J. Calvin Weaver) p. 114, March, 1929.
NEVI
(Jack W. Jones and Herbert S. Alden) p. 372 Aug.,, 1929.

O

ORGANIZED MEDICINE
Some Obligations to (Charles E. Watts) p. 64, Feby., 1929.

P

PELLAGRA
Yeast and Pellagra (N. P. Walker) p. 379, Aug., 1929.
PHYSIOLOGICAL CONGRESS
The Thirteenth International (George Bachmann) p. 526, Nov., 1929.
PSYCHIATRIC STUDIES
Among School Children (Geo. L. Echols) p. 413, Sept., 1929.
PRESIDENT'S REPORT
to the House of Delegates (C. K. Sharp) p. 210, May, 1929.
PRIMIPARA
A Consideration of the Elderly (C. Thompson) p. 145, April, 1929.
PROCIDENTIA UTERI
The Treatment of (Olin S. Cofer) p. 243, June, 1929.

R

RADIOLOGIST
The (Robert Drane) p. 495, Nov., 1929.
RECTUM
An Anomaly of the (L. W. Grove) p. 67, Feby., 1929.

S

SCLERODERMA
Two Cases of—Clinic (C. C. Harrold) p. 354, Aug., 1929.
SERPENTS
Our Poisonous (T. E. Oertel) p. 312, July, 1929.
SINUSES
The Paranasal Sinuses as Foci of Infection (Taylor S. Burgess) p. 266, June, 1929.
SPLENECTOMY
Certain Splenic Syndromes with Indications for Splenectomy (L. G. Bowers) p. 199, May, 1929.
STATE OF WELL-BEING
Developing the (O. W. Bethea) p. 292, July, 1929.
STRABISMUS
The Management of Convergent (William O. Martin, Jr.) p. 378, Aug., 1929.

T

THERAPEUTICS
Learning (W. R. Houston) p. 403, Sept., 1929.
TUBERCULOSIS
Pulmonary, Early Diagnosis and Treatment (Champneys H. Holmes) p. 155, April, 1929.
TUMORS
The Rarity of Brain Tumors in Insane, Epileptic and Feebleminded (Newdigate M. Owensby) p. 148, April, 1929.

U

ULCERS
Acute Perforation of Gastric and Duodenal (J. C. Patterson) p. 502, Nov., 1929.
Results of Surgical Treatment of Gastric and Duodenal (Julian K. Quattlebaum) p. 504, Nov., 1929.
URINARY ANTISEPTICS
(Montague L. Boyd) p. 73, Feby., 1929.

V

VEINS
The Injection Treatment of Varicose Veins (C. E. Rushin) p. 238, June, 1929.

W

WASSERMANN TEST
Studies on the Wassermann Test (Paul Eaton and Fred L. Damren) p. 20, Jany., 1929.
WORM
Pin Worm Infection (M. A. Fort) p. 111, March, 1929.

DEXTRI-MALTOSE FOR MODIFYING LACTIC ACID MILK

Physicians who are partial to the use of lactic acid milk in infant feeding are finding Dextri-Maltose the carbohydrate of choice.

To begin with, Dextri-Maltose is a bacteriologically clean product, unattractive to flies, dirt, etc. It is dry, and easy to measure accurately.

Moreover, Dextri-Maltose is prepared primarily for infant feeding purposes by a natural diastatic action.

Finally, Dextri-Maltose is never advertised to the public but only to the physician, to be prescribed by him according to the individual requirements of each baby.

American College of Surgeons will hold a sectional meeting for Alabama, Florida, Georgia, Mississippi and Louisiana in the Biltmore Hotel, Atlanta, on January 13-14. You are cordially invited.

AUTHORS' INDEX

A

ALDEN, HERBERT S., Atlanta
Nevi, p. 372, Aug., 1929.
ALLEN, L. C., Hoschton
Chronic Indigestion—An Analysis and Classification of Its Etiological Factors, p. 69, Feby., 1929.

B

BACHMANN, GEORGE, Emory University
The Thirteenth International Physiological Congress, p. 526, Nov., 1929.
BAER, WILLIAM S., Baltimore
Arthritis Deformans—Diagnosis, Treatment and Rehabilitation, p. 393, Sept., 1929.
BANCKER, EVERT A., JR., Atlanta
The Increasing Importance of Undulant Fever, p. 448, Oct., 1929.
BASHINSKI, BENJAMIN, Macon
The Laboratory as an Aid in Diagnosis of Diseases of Children, p. 251, June, 1929.
BASS, C. C., New Orleans
Malaria Control, p. 101, March, 1929.
BENSON, MARION T., Atlanta
Some Gynecological Problems, p. 510, Nov., 1929.
BETHEA, O. H., New Orleans
Professional Obligations and Progress, p. 292, July, 1929.
BIVINGS, LEE, Atlanta
Allergic Reaction in Children with Special Reference to Digestive Disorders, p. 369, Aug., 1929.
Allergic Reactions, p. 247, June, 1929.
BOLAND, FRANK K., Atlanta
Centennial Memorial Building Endorsed, p. 6, Jany., 1929.
BOWERS, L. G., Dayton
Certain Splenic Syndromes with Indications for Splenectomy, p. 199, May, 1929.
BOYD, MONTAGUE L., Atlanta
Urinary Antiseptics, p. 73, Feby., 1929.
BUNCE, ALLEN H., Atlanta
Dilution and Concentration Tests of Kidney Function, p. 152, April, 1929.
Doctors, Nurses and the Community, p. 559, Dec., 1929.
BURGESS, TAYLOR S., Atlanta
The Paranasal Sinuses as Foci of Infection, p. 266, June, 1929.

C

CALHOUN, F. PHINIZY, Atlanta
Glaucoma from the Viewpoint of the General Practitioner, p. 308, July, 1929.
CAMPBELL, J. L., Atlanta
Cell Evolution, p. 108, March, 1929.
CARTER, DAN M., Madison
President's Address, p. 423, Sept., 1929.
CHAMBLISS, J. W., Americus
Malaria, p. 78, Feb., 1929.
CHANEY, RALPH H., Augusta
Mesenteric Cysts with Intestinal Obstruction, p. 517, Nov., 1929.
CHARLTON, THOS. J., Savannah
The Use of Quinidine in the Treatment of Heart Diseases, p. 301, July, 1929.
CLARKE, MAURICE BEN LEE, Atlanta
Blood Creatinin, p. 34, July, 1929.
CLAY, GRADY E., Atlanta
Glaucoma Simplex, p. 306, July, 1929.
CLIFTON, BEN HILL, Atlanta
Gas Bascillus Infection—Case Report, p. 143, April, 1929.
COFER, OLIN S., Atlanta
The Treatment of Procidentia Uteri, p. 243, June, 1929.
COLEMAN, E. T., Graymont
Medical Department of the University of Georgia—Centennial Aniversary, p. 80, Feb., 1929.

D

DANCY, WILLIAM R., Savannah
Address of President-Elect, p. 204, May, 1929.
Address before the Twelfth District Medical Society, p. 286, July, 1929.
Address before the Woman's Auxiliary, p. 211, May, 1929.
Centennial Memorial Building Endorsed, p. 5, Jan., 1929.
To the Members of the Association, p. 432, Sept., 1929.
DANIEL, JOHN W., Savannah
Centennial Memorial Building Endorsed, p. 7, Jan., 1929.
Malaria, p. 565, Dec., 1929.
DAVIS, SHELLEY C., Atlanta
Observations in European Clinics, p. 22, Jan, 1929.
DAVISON, HAL M., Atlanta
Asthma in Children, p. 122, March, 1929.
DAYTON, NEIL A., Boston
The Problem of Feeblemindedness, p. 234, June, 1929.
DEAN, J. G., Dawson
Medical Department of the University of Georgia—Centennial Anniversary, p. 80, Feb., 1929.
DENTON, JOHN F., Atlanta
Cancer of the Uterine Cervix, p. 24, Jan., 1929.
DOWMAN, CHARLES E., Atlanta
Lumbar Puncture, p. 85, Feb., 1929.
DRANE, ROBERT, Savanah
The Radiologist, p. 495, Nov., 1929.

E

EATON, PAUL, Augusta
Kahn and Wassermann Tests, p. 325, July, 1929.
Studies on the Wassermann Test, p. 20, Jan., 1929.
ECHOLS, GEO. L., Milledgeville
Psychiatric Studies Among School Children, p. 413, Sept., 1929.
ELKIN, D. C., Atlanta
Enlargement of the Cervical Lymph Nodes, p. 378, Aug., 1929.
EQUEN, MURDOCK, Atlanta
Foreign Bodies in the Food and Air Passages, p. 9, Jan., 1929.

F

FANCHER, J. KENNETH, Atlanta
Insulin in Mal-Nutrition, p. 30, Jan., 1929.
FISHBEIN, MORRIS, Chicago
Fads and Quackery in Medicine, p. 191, May, 1929.
FORT, M. A., Bainbridge
Pin Worm Infection, p. 111, March, 1929.
FOUNTAIN, JAMES A., Macon
Heart Case—Clinic, p. 351, Aug., 1929.
FULLER, G. W., Atlanta
Spinal Anesthesia—Use of Spinocain in 100 Cases, p. 358, Aug., 1929.

G

GAY, THOMAS BOLLING, Atlanta
Routine Circumcision at Birth, p. 218, May, 1929.
GOODRICH, W. H., Augusta
Centennial Memorial Building Endorsed, p. 4, Jan., 1929.
GRAVE, STUART, Tuscaloosa, Ala.
American Medicine and Young Graduates, p. 288, July, 1929.
The Relationship Between Premedical Education and Medical Education, p. 543, Dec., 1929.
GRAY, J. D., Augusta
Agranulocytosis—Report of Two Cases, p. 458, Oct., 1929.
GROVE, L. W., Atlanta
An Anomaly of the Rectum, p. 67, Feb., 1929.

H

HARROLD, C. C., Macon
Two Cases of Scleroderma—Clinic, p. 354, Aug., 1929.
HARVARD, VIRGIL O., Arabi
Centennial Memorial Building Endorsed, p. 8, Jan., 1929.
HOLMES, CHAMPNEYS H., Atlanta
Pulmonary Tuberculosis—Early Diagnosis and Treatment, p. 155, April, 1929.
HOPPE, LEWIS D., Atlanta
Clinics for Children of the Pre-School Age in Atlanta, p. 410, Sept., 1929.
HOUSTON, W. R., Augusta
Learning Therapeutics, p. 403, Sept., 1929.
HUNNICUTT, JOHN A., Athens
Chorea—A Dangerous Complication of Pregnancy, p. 23, Jan., 1929.

J

JARRELL, W. W., Thomasville
Some Homely Truths About the Heart, p. 297, July, 1929.
JONES, JACK W., Atlanta
Nevi, p. 372, Aug., 1929.

K

KELLY, G. LOMBARD, Augusta
The Evolution of a Medical College, p. 1, Jan., 1929.
A New Mode of Artificial Insemination, p. 520, Nov., 1929.

L

LANDHAM, JACKSON W., Atlanta
Radiotherapy in Menstrual and Menopausal Disturbances, p. 215, May, 1929.
LITTLE, ARTHUR D., Thomasville
Why I Belong to My Professional Association, p. 422, Sept., 1929.

M

MARTIN, WILLIAM O., JR., Atlanta
The Management of Convergent Strabismus, p. 378, Aug., 1929.
MASSENBURG, G. Y., Macon
Mycosis Fungoides—Clinic, p. 345, Aug., 1929.
MILLER, R. L., Waynesboro
Centennial Memorial Building Endorsed, p. 3, Jan., 1929.
MULHERIN, WM. A., Augusta
Centennial Memorial Building Endorsed, p. 8, Jan., 1929.
Medical Organization in Georgia, p. 2, Jan., 1929.

O

OERTEL, T. E., Augusta
Our Poisonous Serpents, p. 312, July, 1929.
OWENSBY, NEWDIGATE M., Atlanta
The Rarity of Brain Tumors in Insane, Epileptic and Feebleminded, p. 148, April, 1929.

P

PATTERSON, J. C., Cuthbert
Acute Perforation of Gastric and Duodenal Ulcers, p. 502, Nov., 1929.
PUMPELLY, W. C., Macon
Heart Septal Defect—Clinic, p. 349, Aug., 1929.

Q

QUATTLEBAUM, JULIAN K., Savannah
Results of Surgical Treatment of Gastric and Duodenal Ulcers, p. 504, Nov., 1929.

R

REDFEARN, J. A., Albany
Address Delivering "Badge of Service" to President, Dr. C. K. Sharp, p. 556, Dec., 1929.
RICHARDSON, C. H., JR., Macon
The Choice of an Anesthetic, p. 105, March, 1929.
Postoperative Pulmonary Atelectasis—Clinic, p. 355, Aug., 1929.
ROBERTS, C. W., Atlanta
The Challenge of Industry to Present Day Medicine, p. 317, July, 1929.
ROGERS, T. E., Macon
Pernicious Anemia—Clinic, p. 348, Aug., 1929.
ROZAR, A. R., Macon
Gallbladder Diseases—Clinic, p. 341, Aug., 1929.
RUSHIN, C. E., Atlanta
The Injection Treatment of Varicose Veins, p. 238, June, 1929.

S

SCHWEINITZ, G. E. de, Philadelphia
Dr. deSchweinitz Tribute to Dr. Abner Calhoun, p. 50, Feb., 1929.
Concerning Headaches—Being an Essay on Certain Etiological Factors and on Distinctive Features and Their Mimicries, p. 51, Feb., 1929.
SECKINGER, DANIEL L., Savannah
The Maternity Hygiene Program of Savannah and Chatham County, p. 549, Dec., 1929.
SHANKS, EDGAR D., Atlanta
Organic Heart Disease—Concerning the Diagnosis, p. 81, Feb., 1929.
SHARP, C. K., Arlington
Centennial Memorial Building Endorsed, p. 5, Jan., 1929.
Presidential Address, p. 187, May, 1929.
SMITH, J. M., Valdosta
Centennial Memorial Building Endorsed, p. 7, Jan., 1929.
SMITH, WILLIAM A., Atlanta
Epilepsy, p. 117, March, 1929.
The Epilepsies, p. 464, Oct., 1929.
SINKOE, SAMUEL J., Atlanta
Abdominal Pain, p. 36, Jan., 1929.
STEWART, CALVIN B., Atlanta
Carcinoma of the Cervix Uteri, p. 27, Jan., 1929.

T

THOMPSON, C., Millen
A Consideration of the Elderly Primipara, p. 145, April, 1929.
THOMPSON, O. R., Macon
Nausea and Vomiting in Early Pregnancy, p. 17, Jan., 1929.
TOEPEL, THEODORE, Atlanta
The Sesamoid Bones, Important Factors in Deformities of the First Metatarsophalangeal Joint, p. 499, Nov., 1929.
THURMOND, J. W., Augusta
Spinal Anesthesia in Obstetrics, p. 140, April, 1929.

V

VAN DE VREDE, JANE, Atlanta
A Plea for Further Cooperation, p. 380, Aug., 1929.
Hammers and Monkey Wrenches, p. 159, April, 1929.

VERNOU, EUGENE R., Atlanta
Glaucoma Simplex, p. 306, July, 1929.

W

WAITS, CHARLES E., Atlanta
Some Obligations to Organized Medicine, p. 64, Feb., 1929.
WALKER, N. P., Milledgeville
Yeast and Pellagra, p. 379, Aug., 1929.
WARREN, WILLIAM C., Atlanta
Chronic Infection of the Maxillary Sinus, p. 14, Jan., 1929.
WEAVER, J. CALVIN, Atlanta
Neurological Diseases, p. 114, March, 1929.
WILKINSON, W. L., Bainbridge
Acriflavine as an Injection in Colitis, p. 84, Feb., 1929.
WRIGHT, LEWIS H., Augusta
Spinal Anesthesia in Obstetrics, p. 362, Aug., 1929.

Y

YAMPOLSKY, JOSEPH, Atlanta
A Report of Six Years of the Intraperitoneal Use of Neoarsphenamin and Mercurosal in Congenital Lues, p. 444, Oct., 1929.

IMPORTANT TO WEARERS OF ARTIFICIAL LIMBS

While the advancement of science in this particular field has been a benefaction to those compelled to make use of artificial arms and legs, yet there are some objectionable features that characterize some of these products and it is our purpose in this article to point out the danger consequent upon the use of artificial limbs that are not constructed along strictly scientific lines. At the outset it should be understood that the stump of the limb is far more sensitive than the tissues of a normal leg or arm. Even the scar tissue, while the nerves do not function, is peculiarly susceptible to injury from undue pressure or from abrasion. A badly fitting artificial limb causes constant irritation and frequently results in an infection terminating in gangrene, thus necessitating a further amputation of the stump.

Again, unless properly adjusted the artificial limb fails to coordinate with the living organism and the result is a pronounced limp or the inability of the wearer to utilize the artificial aid to its fullest possibility.

We have come upon the makers of artificial limbs whose products are free from these drawbacks and which are superior in every way.

Reference is made to the product of J. E. Hanger, Inc. These manufacturers are probably more familiar with the technicalities of artificial limbs and have a more practical knowledge of their requirements than have any other artificial limb makers in this country.

The product of J. E. Hanger, Inc., is constructed in accordance with exact anatomical knowledge and is free from the annoyances so familiar to many who wear artificial limbs.

Their adjustability is such that these limbs conform to all of the normal movements of the body and readily coordinate with the living muscles so that all move in perfect accord—just as would the entire limb in perfect health. There is no discrepency—no discord; the stump and the artificial limb are practically one, and work as such.

We have no interest whatever in exploiting any special make of these articles or desire to promote the interests of any particular manufacturers, but in the interest of our readers we make this report. As no charge whatever has been made and no advertisements solicited the report may be safely acted upon as being thoroughly unprejudiced and without bias.

We have satisfied ourselves by examinations conducted without the knowledge of the subject investigated, and, as a result, we unhesitatingly pronounce the Hanger artificial limbs the best in all respects.

J. E. Hanger, Incorporated, 412 West Peachtree St., N. W., Atlanta, has twenty-seven places in the United States. See advertisement in this issue.—Indianapolis Medical Journal, November, 1929.

PACKAGE LIBRARY

You may obtain a Package Library on any medical or surgical subject by sending 25c in postage to Miss Myrtle Tye, Librarian, Calhoun Medical Library, Emory University, Georgia. Charges cover only the cost of packing and postage for mailing to you.

AWTRY & LOWNDES
FUNERAL DIRECTORS
AMBULANCE SERVICE

Doctors' Exchange - - Nurses' Registry

Also known as Physicians and Surgeons' Exchange

1001 Ponce de Leon Ave., N. E., Atlanta (3 Phones) Hemlock 6300. Nurses for any kind of case anywhere. Registered Graduate, Undergraduate and Practical. White, colored and male.

Hourly Nurses and Masseuses.

"IMPARTIAL - - ETHICAL - EFFICIENT"

THE INITIAL MONOGRAPH

of

The Ready Reference Medicine and Surgery

on

Malaria and Intermittent Fevers

28 Colored Plates, 17 Black and White Drawings

Author D. Drydale Anderson, M.D.

Introduction by Allen H. Bunce, M.D.

is just going to press and will be of interest to every worth-while man of the medical profession as it covers the fundamentals as well as all new advances on the subjects, and will be arranged so that succeeding pages may be printed and numbered numerically to be tipped in, covering all valuable advances periodically for ten years, thus perpetuating the efficiency and value of the work for the convenience and information of subscribers, keeping it continually up to date for this period in permanent binding.

This is the forerunner of THE READY REFERENCE MEDICINE AND SURGERY, planned in sections to economize both time and money for the physicians, built exclusively in the interest of the medical profession, through the co-operation of the Physicians' Co-operative League, of the physician, by the physician and for the physician.

S. J. Pridgen, Organizer,
524 Thrower Bldg.,
Atlanta, Ga.

You may send me the initial MONOGRAPH on MALARIA when off the press for which I enclose the pre-publication price $5.00. Satisfaction guaranteed or money refunded.

Also advise me how I can obtain Charter Life Membership in the Physicians' Co-operative League for the development of THE READY REFERENCE MEDICINE AND SURGERY.

REFERENCES:

F. K. Boland, M.D., F. A. C. S.
J. L. Campbell, M.D., F. A. C. S.
M. C. Pruitt, M.D., F. A. C. S.
W. F. Shallenberger, M.D., F. A. C. S.
W. L. Funkhouser, M.D., F. A. C. P.
Teachers in Emory University School of Medicine, Atlanta, Ga.
E. G. Ballenger, M.D., F. A. C. S.
Author Ballenger Genito Urinary Diseases.
G. Pope Huguley, M.D.
Allen H. Bunce, M.D., Sec., Ga. State Med. Assn., and Editor of the Journal, Atlanta, Ga. Edgar A. Hines, M.D., Sec., S. C. Med. Assn., and Editor of the Journal.

Name .....

Address .....

BOSTON MEDICAL
MAY - 9 1931
LIBRARY

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | January, 1929 | No. 1

MEDICAL DEPARTMENT OF THE UNIVERSITY OF GEORGIA
CENTENNIAL ANNIVERSARY

THE EVOLUTION OF A MEDICAL SCHOOL

G. LOMBARD KELLY, M.D.
Alumni Secretary, Medical Department, University of Georgia, Augusta

Those of us living today can have at best only a very hazy idea of what medical education consisted of a hundred years ago. We know that the courses were short and that in many schools the teaching was almost wholly didactic and that the student graduated after listening to the same series of lectures for two years or more. Empiricism was the order of the day and the experimental method had by no means come into its own in medicine.

With these limitations of method, in addition to material handicaps, there was nevertheless founded in Augusta in 1828 the institution that is today the Medical Department of the University of Georgia. It is superfluous here to trace the activities of this school from its founding by Milton Antony to the present. All of this has been covered in detail in the recently published History of the Medical Department of the University of Georgia, written by Dr. W. H. Goodrich, the present dean. The early teachers in this school of medicine have left illustrious names and proud records of achievement behind them. The least that we of today can do to honor these predecessors is to carry on in a manner commensurate with their high ideals and the great progress they made under utmost difficulties.

The short courses were followed by the longer ones until the standard one of four years was reached; after this the logical step was increasing the time of preparation for the study of medicine from a high school education to one year of college work and finally to two years of premedical work, consisting of a definite curriculum containing biology and chemistry as required subjects. After one or more changes of name the college was finally taken over by the state university and given its present designation as its medical department. With the passing of the years the straight didactic and empirical method had given way to some extent to the laboratory and each decade marked more or less progress in this respect.

The evolution of a medical school, if plotted on a graph sheet, would not show a steady rise; there would be here and there steady rises and maybe now and then a fall in the curve. But the most acute change in the graphs of evolution of a large number of medical schools would be a sudden upshoot of the curve about twenty years ago. This might be called the "Flexner gradient." This was the time of the great upheaval in medical education, with the laying down of standards, the rating of schools, the growth and expansion of some and the complete demise of others. Our own school braved this "epidemic" of inner cleansing and by a brave effort conformed. It has been making creditable and determined efforts to conform ever since; it has done more than that and it is now resolved to show another sharp upward trend in the graph of its growth.

Since the upheaval about two decades ago the school has not had the easiest sailing; there have even been prophesiers of dire disaster and some claimed it was just a question of a short time before a period could be placed at the end of the graph.

In the face of discouragement, with inade-

quate support from the state, but with a grim spirit of do or die, the college has steadily increased its efficiency and by graduating larger and larger classes its service to the state and country. Largely through the efforts of the late lamented Dean Doughty the school obtained the moral support of the Rockefeller Foundation and the Carnegie Institute, as well as some financial assistance. This aid was of five years' duration and in this time full-time departments of medicine, surgery and obstetrics were added, laboratories were improved, others were added and a definite improvement in morale as well as in physical equipment, curriculum, and staff was easily discernible. During this time there was added also the School of Public Health and the teaching of preventive medicine became a much more important part of the curriculum. Within a very short time now the department of pediatrics will also be put on a full-time basis, all the necessary plans for this having been worked out and the preparations nearly completed. All of this shows that with the necessary spirit of ambition the natural evolution of the school is a matter of course. In spite of difficulties, in the face of false prophets, it has steadily gone forward; it is steadily going forward and upward.

And now the time has come when the graph sheet must show another sharp rise in the progress curve of the college. The swaddling clothes have been outgrown and must be set aside. Increases in number of students, in number of instructors, in number of laboratories, and the demand for more space and equipment for research have made expansion absolutely imperative. The school must grow; it can not stand still when everything is on the qui vive for another burst in its evolution. New hope came when the 1927 legislature replaced the funds that had been received from the Carnegie and Rockefeller funds for five years and placed the maintenance of the institution on a firm financial basis. It is quite certain the state will do what it can, but our state, like our medical school, is undergoing a process of evolution and it may be years before it can improve on its latest increase. It is time now for the alumni and friends of medical education to come forward and take part in this forward move, this necessary step, which will mean so much not only to the school itself, but to medical education in Georgia. As alumni secretary and chairman of the executive committee for raising the Centennial Memorial Fund, I hereby pledge my own support in this work and bespeak that of every loyal alumnus and of every friend of medical education in the state.

MEDICAL ORGANIZATION IN GEORGIA

WILLIAM A. MULHERIN, M.D.,
Augusta

The Medical Association of Georgia represents organized medicine in our state. Its purposes, as we all know, are to maintain the high ideals of medicine as they pertain to our profession and to the state, to foster medical fraternization, and last, but not least, to insure the future welfare of our medical organization in Georgia.

New blood is an essential to all worth while organizations, and the Medical Association of Georgia is no exception. Emory University Medical Department, and the University of Georgia Medical Department are not furnishing to the state of Georgia a sufficient number of graduates to replace the loss in our ranks of physicians who are dying, retiring from practice on account of age, or leaving the state. This state of affairs deserves serious consideration, for if not corrected the Medical Association of Georgia will shortly feel its ill effects.

Emory University is measuring to her responsibilities in a very commendable manner, but the University of Georgia Medical Department is not "delivering the goods." Last year 50 applicants were denied admission to the Medical Department, University of Georgia, after our limit of 36 men had been accepted. Twenty-five per cent of these applicants who were denied admission, were men from the state of Georgia. The lack of buildings, and in consequence, limited space and facilities for teaching the basic

science, and for conducting outdoor clinics, is the explanation for this state of affairs.

The correction of such condition is a problem for organized medicine of the state, and for the state of Georgia itself, to solve. Judging from the very kind and enthusiastic support that the proposition of erecting a Centennial Memorial Building is receiving from the physicians of Georgia, and notably from the Fulton County Medical Society of Atlanta, I feel quite positive a solution to the problem is near at hand.

It might be well for every physician and citizen of Georgia to remember that the Medical Department of the University of Georgia is their medical school, and not the medical school of the profession of Augusta. Its work and results will reflect either credit or discredit on our profession and our Empire State of the South.

For the good of the Medical Association of Georgia, and for the glory it will bring to our dear old state, let's all get together and build the Centennial Memorial Building, which will permit our State Medical School to function in a manner pleasing to all.

CENTENNIAL MEMORIAL BUILDING ENDORSED BY PROFESSION

At the annual meeting of the Alumni Association of the Medical Department of the University of Georgia last June, a committee was appointed consisting of the officers of the Association and two members of the faculty, to devise what in their judgment would be the best way whereby the alumni carefully into every need of the College, we unanimously decided that if we could devise might serve their Alma Mater. After going plans whereby we could relieve the great need for additional clinical and teaching room, we would render the greatest service. After careful consideration this committee decided to go to the alumni with an appeal to raise $300,000.00 with which to build the Alumni Centennial Memorial Building. On December 1 the following letter was mailed to the alumni by the president of the association:

"As you are aware, this year completes one hundred years of faithful service of our Alma Mater, during which time she has faithfully served — not Georgia alone, but the world.

"Step by step she has kept fully abreast of every advance in medical science, until today she ranks with the best medical schools of the country, being second to none, and far in advance of many.

"Her alumni have taken their place in the forefront of the profession wherever they have gone. Her graduates are eagerly sought after for interneships in the leading hospitals of America. These great strides have been made in the face of seemingly insurmountable obstacles, the chief of which has been the want of the proper room for teaching.

"Realizing this at the last commencement, the Alumni Association determined that it would no longer allow her to be thus handicapped. After a careful study of the situation, it was unanimously decided that we begin, during this centennial year, to appropriately celebrate it by building the 'Alumni Centennial Memorial Building' as an everlasting monument to every man who has had the honor to go forth from her halls the proud possessor of a diploma.

"This forward movement will not only more adequately equip her for making even greater strides in medical education, but will add to the value of every man's diploma.

ADMINISTRATION BUILDING

From a modest beginning to national prominence.

"I sincerely trust that no alumnus will allow this opportunity to pass without taking part in this great forward movement to keep our school at the very top of the medical schools of this country.

"Our plans are to expend $300,000.00 in this work, details of which will be given to you at no distant day.

"Yours for a greater Medical Department of the University of Georgia."

The response to this letter has been most gratifying, in fact so great has been the interest manifested by the alumni that we feel that the success of the undertaking is assured.

I would feel that I had been derelict in my duty as president of the association if I did not take this opportunity to thank the Editor of the Journal and the Publication Committee for their generosity in devoting so much of the space of this issue to our cause. We thank you most sincerely.

R. L. MILLER, M.D., President,
Alumni Association of the Medical Department of the University of Georgia, Waynesboro, Ga.

To the Editor:

It is a source of very great satisfaction and pride to the members of the faculty of the Medical Department of the University of Georgia that the Alumni Association of this school are preparing to celebrate this centennial year by building the Centennial Memorial Building.

It is unfortunate that the school with its present established efficiency, is not large enough to take in a number of non-resident applicants who are continually applying for entrance into the school. For the past five or six years practically only Georgia boys have been taken in, and last year we were forced, because of lack of laboratory space, to turn away 26 Georgia boys. The state of Georgia needs on a very conservative basis, 100 new physicians a year in order to maintain an adequate supply of doctors to make up for the losses by death and to take care for the increase in population. This is a very conservative estimate and represents a low minimum, making no provision for a reasonable surplus. New physicians to supply this need may be trained in medical schools within or without the state. The experience of the past ten years proves that Georgia cannot rely upon medical schools outside of the state, so that there is no escape from the conclusion that if Georgia is to have an adequate supply of new physicians there must be provision for their education in the medical schools within the state. Emory is equipped to handle and graduate a maximum of 60 students a year—a number which she has placed as her upper limit. Approximately one-third of the medical graduates are from other states than Georgia, so that the maximum number of graduates from Emory who are likely to remain in Georgia are 40 a year. The medical department of the University of Georgia, is at present equipped to graduate annually a maximum of 36. The combined maximum output of the two schools of physicians available for the state of Georgia is, therefore, about 75, which is 25 less than the number needed.

It is with these facts in mind that we feel that the alumni of our school are to be earnestly congratulated in developing a program of expansion which will ultimately enable the Medical Department of the University of Georgia to handle adequately classes of 50 or 60 students. We are also deeply impressed and gratified by the interest and co-operation of many doctors in the state who are graduates of other colleges. With the annual out-

UNIVERSITY HOSPITAL

Erected and equipped by the city of Augusta at a cost of a half million dollars. The University Hospital is conceded a high rank among the leading hospitals of the country. Here the students have a splendid opportunity to gain a wide variety of clinical experience in medicine and surgery.

put from Emory plus 50 or 60 new physicians from the Medical Department of the University of Georgia, the impending shortage of physicians will be averted.

W. H. GOODRICH, M.D., *Dean, Medical Department of the University of Georgia, Augusta, Ga.*

To the Physicians of Georgia:

To those who are in sympathy with "A" grade medical schools in their endeavor to raise the standard of medicine by conforming themselves to modern scientific teaching, I want to commend the medical department of the University of Georgia at Augusta in their laudable enterprise of raising a fund for the erection of a building to be known as the "Centennial Memorial Building." The State Medical School has suffered reverses during the past few years in the form of conflagrations, etc., but with all these handicaps with which it has been encumbered, it has "carried on," and the alumni from this splendid institution with its excellent corps of teachers, have gone forth to take their places with the best and have shed lustre on their Alma Mater wherever dispersed, and it should be the pride of every Georgian, physician or layman, as well as the physicians of the entire Southeast, to see that this ambition on the part of the University is realized.

Medicine is making rapid progress in every branch and that it may be properly taught every facility should be available. Our legislature should by right provide these things, but it is too slow in making these necessary provisions, if it ever does. By taxation, through legislative act, every citizen has a part, but this method of raising funds for this noble cause can not be hoped for, so we physicians especially, should consider it a privilege to assist in this worthy cause so that our State University may take her place among the institutions of higher medical learning unhampered.

Here's hoping she will go "over the top."

C. K. SHARP, M. D., *President, Medical Association of Georgia, Arlington, Ga.*

To the Editor:

It is with profound pleasure that I learn of the splendid efforts of the alumni of the Medical Department of the University of Georgia to obtain funds to erect a handsome and adequate Memorial Building, for the medical education of the young men of the state, and to the memory of the wonderful deeds and superb accomplishments of the great profession in Georgia. This splendid institution, a branch of the State University, is located in Augusta, Ga. It is one of the best medical schools in this country; always maintaining the highest standards and fulfilling the best traditions of the profession. It is served by a conscientious and efficient faculty of skilled and highly trained teachers, representatives of the best that the profession affords. Through the efforts of this institution, the state of Georgia and other states also have been supplied with many splendid physicians. At present the supply of desirable applicants is far in excess of the institution's facilities for handling them. New buildings with suitable equipment are necessary. A start is being made with the $300,000 Centennial Memorial Building; others will follow for the youth of the land must be educated and the people of Georgia provided with efficient and adequate medical services. This can be done only by every one assisting the grand old institution to maintain its honored position in the front ranks of medical institutions.

The alumni of the Medical Department, University of Georgia, are fostering the placing of this Centennial Memorial Building in

WILHENFORD CHILDREN'S HOSPITAL

In the Wilhenford Children's Hospital our students have available excellent facilities for pediatric teaching. Our graduates are sought after for interneships by the foremost hospitals in the United States. Full time departments of medicine, surgery and obstetrics are now maintained. Pediatrics will soon be on a full time basis.

the medical group at Augusta, but, touched by a sense of pride and a normal generous spirit, every man in the medical profession in Georgia should be behind this laudable effort and co-operate with the alumni for the advancement of medicine in this state. Not only should the profession as a whole render all efforts possible but the state legislature and the public generally should do their part for they are reapers of the great benefits emanating from this work. Reflect on those who helped you towards the pinnacle of your medical education, consider your duty in the first instance and add to these the pleasure and satisfaction of giving, then help by contributing your mite.

WM. R. DANCY, M.D.,

President-elect, Medical Association of Georgia, Savannah, Ga.

To the Editor:

I think it is a splendid thing for you to dedicate the present issue of our Journal to the Medical Department of the University of Georgia, in its campaign to raise $300,000.00 for the erection of the new college building in Augusta.

This school has a wonderful record of service back of it and merits the active support of every citizen of the state. I am certain that every Georgia doctor realizes the need of increased facilities for medical education in the state and will do everything in his power to make this drive a success. The main thing is to impress the laity with the importance of making good doctors and with the enormous expense involved.

Thirty or forty years ago the education of a medical student was a comparatively simple and cheap proposition. As a matter of fact, the amount of money actually spent in equipping and maintaining medical schools was so small that the institution was able to declare a substantial dividend each year for the benefit of the faculty. Today, with the elaborate laboratory and clinical facilities required, with the requisite corps of high priced full-time professors and with the hospital connections necessary it is almost impossible to have enough money to conduct a medical school as it should be conducted.

If the average layman can be shown how much more it costs to properly operate a medical school as compared with the cost of an ordinary academic school or of a law, theological or engineering institution, surely he will be willing to go down into his pocket for this magnificent idea which is being fostered by the University of Georgia. The average layman may think that there are already enough doctors in the country, but he must be shown that doctors are the shortest lived class of men in the country. They pass on rapidly and their places must be constantly filled by younger men. Besides, as the population of the country increases, more doctors become necessary. We will never have too many good doctors. I wish this project the greatest success and will contribute to it in any way that I can.

FRANK K. BOLAND, M.D.

Atlanta, Ga.

To the Editor:

Where sentiment, altruism and practicability are all combined in the same proposition one need not hesitate to go ahead. This is how the alumni of the Medical Department of the University of Georgia should view the proposal to erect a Memorial Building.

Sentiment is involved, for it will fittingly celebrate its Centennial Anniversary. The building will stand as a monument, bespeak-

NEW NURSES' HOME

Presented by the city of Augusta in 1928 at a cost of $150,000.00.

Friends of the institution, especially Winter residents, aided in this project.

ing in years to come appreciation of our Alma Mater, awakening memories of college days, and cementing those ties that bind us in our honored profession.

The altruistic motive behind the project should be a compelling one. We only grow in the true sense as we broaden our scope and reach out a helping hand to others. "To give is to live." The record of the Medical Department of the University of Georgia has been such as to gain a wide recognition. To keep the institution in the high place already gained there must be a policy of expansion.

That the erection of such a building would be practical no one can doubt. It is a necessity on account of the cramped quarters of the present building. The welfare of the state of Georgia is at stake because present facilities are inadequate to educate the number of physicians actually needed to safeguard our citizens. The quarters for clinic work, we are informed, are unsuitable. This is a handicap that should be remedied as quickly as possible.

Let us remember that this forward movement originated with the Alumni Association, and it is pledged to its success. The building is to bear the name of the Alumni Association, and that good name can be preserved only to the extent that every alumnus takes an active and unselfish part in this laudable enterprise.

I am writing this appeal, not as an alumnus of this institution, on the first day of the year 1929, and at a time when every one of you perhaps, is engaged in fighting the widespread influenza epidemic. But far be it from any of us to forget our sister institution, the Medical Department of Georgia, in her efforts to erect this memorial. It is always up to the busy man to put things over. Let us resolve here and now in one concerted effort to make the proposed Memorial Building a reality.

J. M. SMITH, M.D.,
Valdosta, Ga.

To the Editor:

It is very gratifying to see that the people of Georgia are at last beginning to realize that one of the best investments they can make is to have adequate facilities for the teaching of medicine.

The function of a medical school is merely to construct a foundation upon which the future structure—the competent physician—is erected. A school lacking in facilities, professorships, laboratories, etc., necessarily will not lay a foundation for very strong future building. Our legislature has been very unfair to the people of Georgia in that our entire educational system has been neglected in order that the political machine might grow, so it now behooves the people to either see that their tax money is properly applied for better educational facilities, or by individual subscriptions carry on the much needed work.

When young men or women go into the practice of medicine they take up a life work of service to their fellow man with very little reward other than the consciousness of duty well done, therefore, it should be impressed upon the people of Georgia that for their own protection from a health standpoint, if for no other reason, they should supply the youth of Georgia with adequate facilities to become the most proficient protectors of health and life. A people who are not adequately protected from a health standpoint, are inefficient in that they lack man power and ability to compete with communities that are enjoying good health.

The burden of erecting and equipping colleges for medical education should not be thrown entirely upon the shoulders of the medical profession. Already more than half of our life work is given to the unfortunate poor without a thought of compensation, so we can justly ask of those who are able to co-operate with the physicians and help us to put our medical department of the University system on a parity with the colleges of other states where the legislatures are broader and more liberal than ours. I sincerely hope that every resident of Georgia will contribute to the fund of the medical department and thus feel that they are doing their part for the protection of the lives of the future generations. If every man and woman in Georgia who is financially able would do their part the raising of three hundred thousand dollars would be completed within a very short time. There should be no need of intensive drives to raise money for such a crying need in our state.

JOHN W. DANIEL, M.D.,
Savannah, Ga.

To the Editor:

The Medical Department of the University of Georgia is endeavoring to raise a fund of about $300,000 for the purpose of erecting a new building at the college. This building to be known as the Centennial Memorial Building, to celebrate the hundredth anniversary of the school.

This building will increase the scope of usefulness of this honored institution and help it to measure more fully to its responsibilities to the grand old profession of medicine. A new building for holding clinics and for

teaching is sadly needed, and will prepare the graduates much more thoroughly for their entrance into active work. The total number of graduates of Emory University and the Medical Department of the University of Georgia each year can not supply Georgia with enough practitioners to take the place of those of our profession who are dying or leaving the state or retiring on account of age.

The Medical Department of the University is your Medical School, and is either a credit or a reflection upon every member of the medical profession in this state. With the assistance of the medical profession of Georgia, its activities can be greatly extended, and it will be of much greater value to the state along medical lines.

The medical profession of Augusta and the citizens of Augusta have given generously to this state institution. The members of the faculty, exclusive of full-time professors, receive no compensation for their work at the school. This alone saves the state thousands of dollars annually and is a great financial sacrifice on the part of each doctor contributing his time.

This letter is not written in a begging spirit, but more as an appeal, with the hope that you will visualize the medical problem in Georgia as I see it. This college has been and will be, loyally supported by the medical profession of Augusta. Our burden has been heavy, but we ask no commendation for carrying it. However, I will consider it a personal favor if you will help by contribution and with your good will, in our efforts.

WM. A. MULHERIN, M.D.
Augusta, Ga.

To the Editor:

The Medical Department of the University of Georgia is attempting to raise a memorial fund of approximately $300,000 to celebrate the one hundredth year of its existence.

No worthier ambition could they have than trying to enlarge their building space, so that they might be able to accommodate those that are trying to enter the noble profession of medicine.

We all know how sadly the ranks of the profession are being depleted by old age, death and removal from our state.

The Medical Department of the University of Georgia belongs to the whole state, and we should all do our part toward the erection of this Memorial Building, which will do so much to relieve the congested condition at the school.

The Medical Department of the University of Georgia has always stood for the highest in medicine and has contributed her share to medical science.

She never has been a slacker at any time or in any cause.

With all good wishes for its success.

VIRGIL O. HARVARD, M.D.
Arabi, Ga.

FULTON COUNTY SOCIETY ENDORSES MEMORIAL PROJECT

At its regular meeting on December 20th the Fulton County Medical Society unanimously endorsed the movement to erect a Centennial Memorial Building at the Medical Department of the University of Georgia in Augusta.

CHRONOLOGY, MEDICAL DEPARTMENT, UNIVERSITY OF GEORGIA

1828, *December* 20. General Assembly of Georgia passed an Act "to establish and incorporate the Medical Academy of Georgia."

1828, *March* 2. First meeting of the Board of Trustees held in the Council Chamber, Augusta.

1829, *October* 1. "Faculty commenced the duties of instruction" to seven matriculates.

1829, *December* 19. Name of institution changed by an Act of the General Assembly to "Medical Institute of the State of Georgia."

1833, *April* 17. First commencement. Four candidates received the degree of Doctor of Medicine.

1833. Name changed to "Medical College of Georgia."

1834, *May*. Erection of first college building begun.

1836, *June*. First number of the Southern Medical and Surgical Journal issued from press.

1873, *July* 5. "Agreement between the 'Medical College of Georgia' and the 'University of Georgia,'" whereby the former became the "Medical Department of the University of Georgia."

1911. Became an integral part of the State University.

"This is the oldest medical college in Georgia; it was the first in the United States to increase its terms to six months; it organized the first medical journal in the South; and from its efforts to secure longer terms came the organization of the American Medical Association."

—W. H. GOODRICH, M.D.,
the University of Georgia.

The History of the Medical Department of

FOREIGN BODIES IN THE FOOD AND AIR PASSAGES*†

MURDOCK EQUEN, M. D.
Atlanta

The removal of foreign bodies from the food and air passages is now a recognized surgical procedure since the advent of the esophagoscope and bronchoscope and its perfection by Dr. Jackson. The first method of removing foreign bodies was to do a tracheotomy. Should object be in the lung, the custom was to elevate foot of bed and hope that foreign body be coughed up. Tickling the lumen of the trachea was resorted to in an effort to create violent expulsive forces which would force object out of tracheal wound. If object was in the esophagus, a neck incision was made and attempt to remove object with curved forceps made. Success attended the tracheotomy far oftener than the opening of the esophagus. When one considers how deeply the esophagus is placed one realizes how difficult its approach and how futile an attempt to remove object becomes. The next advance made was by Dr. Bruening who passed a bronchoscope through a tracheotomy wound which enabled him to reach far downward in the tracheobronchial tree. This procedure too was followed by a high rate of failures, pneumonias, and chronic tracheotomy tube cases. The next advance was made by Dr. Jackson who conceived the idea of using a much smaller tube, one that would pass through the laryngeal box (head being extended backward) thus doing away with tracheotomy. Dr. Jackson also changed the lighting system, putting the light on the end of the scope close to the part to be examined or the object to be removed, instead of throwing the light downward in the lumen of tube by a series of reflected mirrors. Foreign bodies are usually seen in the two extremities of life, that is, in early youth before the teeth have made their appearance, or later on in life when teeth have been lost. There is no doubt that during the act of mastication we are able to detect foreign bodies by our teeth coming into contact with same, thus enabling us to detect and remove same. Objects frequently slip by artificial teeth on account of the absence of nerve sensation. Generally speaking, foreign bodies may be divided into two main classes, metallic and non metallic, or organic and inorganic.

To the first class, or metallic objects, the lung substance is most tolerant, such objects having been present years before producing extensive pathological changes. To the non metallic or vegetable class, the lung is far more aggressive, their presence resulting rapidly in a pneumonia and subsequent lung abscess. Dr. Jackson has noted the condition so frequently following the aspiration of vegetable objects that he has termed this condition a vegetable tracheo-bronchitis. Peanuts are the most irritating of all vegetable substances, this resulting from the oil in nut which is brought out during the process of parching of nut. In the diagnosis of a foreign body case a most careful history should be taken to elect occurance of choking, gagging, cyanosis, wheezing respiration, fever, cough pain, dyspnea, dysphagia, odynophagia, and regurgitation at time of accident. Frequently a history is unattainable on account of the age of the child and absence of anyone at time child swallowed object. In such cases one has to depend entirely on signs and symptoms present. Foreign bodies in the larynx usually produce a wheezing respiration which is peculiar to the larynx and which is readily localized there. If the object is large and present in either the larynx or trachea, there is usually an accompanying dyspnea, with indrawing of supersternal notch supra clavicular fossae costal inter spaces and lower sternum. When objects are in the bronchial tree symptoms are entirely dependent on their position. A metallic object may only present symptoms of an obstructive emphysema, whereas were the object a peanut a marked bronchitis would exist, extending beyond area obstructed. X-rays should always be taken as they are of rapid assistance in the diagnosis of a metallic object, whereas the pictures of vegetable objects must be more carefully studied to determine position of diaphram and degree of

*Read before the Medical Association of Georgia, Savannah, Ga., May 11, 1928.
†Bronchoscopic Clinic, Emory University.

destructive emphysema, if any present. The symptoms of an esophageal foreign body are usually of difficulty in swallowing and coughing when object is sufficiently large to cause pressure on the larynx. Should foreign body have been present a long time with a perforation of the cervical esophagus there will exist a subcutaneous emphysema and cellulitis, with an accompanying pneumonia due to the overflow of fluids into the trachea. Foreign bodies in the intestines as a rule usually pass out harmlessly, but not always. If opaque to the ray they should be watched fluroscopically. If a foreign body remains in the intestines in one position for more than four days, a laparotomy should be done. If an object passes the duodenum safely the chances are that it will pass safely out. It is this point that objects, especially open safety pins, are most liable to become caught and it is the most difficult in its approach for the surgeon. Open safety pins in the intestines should be closed gently and intestines not opened.

There is no treatment for foreign bodies except early bronchoscopy. Digital attempts at removal are wrong as frequently objects high up in the pharynx are shoved downward, either into the larynx or esophagus. Slapping a child on its back or swinging by its feet may cause violent inspiratory action which may carry a foreign body located high up far down into the lower bronchial tree, or object may be caught by vocal cords followed by sudden asphyxiation. The giving of emetics or purgation should not be done as either one may cause a sharp foreign body to penetrate, with a subsequent fatality. When

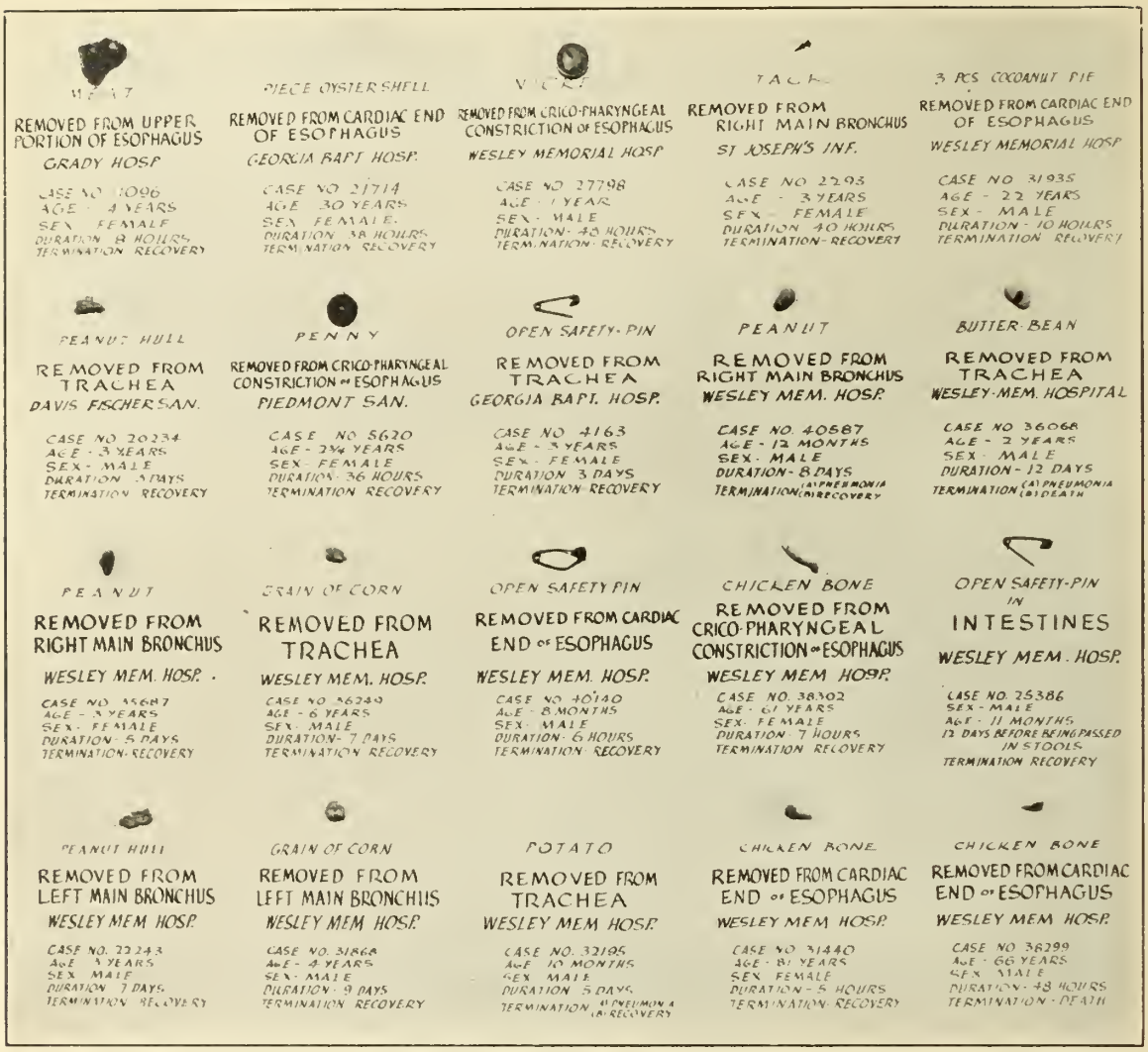
a history of swallowing or aspiration of foreign body is given, such case should never be considered negative until the foreign body is coughed up, seen by X-ray, removed by bronchoscopy or passed in stools.

DISCUSSION ON PAPER OF DR. EQUEN

Julian F. Chisholm, Savanah: As Dr. Equen said, there is only one treatment for foreign bodies in the food and air passages, and that is bronchoscopy. I have recently spent a few days with Dr. Jackson in his clinic, and the perfection of his work is amazing. Dr. Equen knows and has described to us the development of the bronchoscope up to the present time. We owe Dr. Jackson a great debt of gratitude for what he has done. The outstanding thing in the matter is that formerly these foreign bodies were overlooked, but our treatment has changed and they are now being observed. There is nothing to do but bronchoscopy. We look back on the old method of tracheotomy for foreign bodies in the traches, many of which operations were successful and many of which failed, and we are delighted that we have this method. We used to have many ways of removing foreign bodies from the esophagus, one of which was the old probang. Many of the men here have seen and used it, I am sorry to say, I have seen one case in which the foreign body was forced through the esophagus, with a resulting pneumonia and fatality. I think all physicians are agreed that in each and every case of acute disease of the lungs foreign bodies should be eliminated.

Dr. Bernard McH. Cline, Atlanta: I want to thank Dr. Equen for his paper, for I think he has probably done more work along this line than any other man in Georgia.

There are one or two points that I think should be emphasized to the general physi-



cians in their treatment of these patients. One is that they should allay the fears of the parents regarding the time of removal of the foreign body. If the child swallows a foreign body of any kind the first thing the parents think of is removing it at once. Frequently the child has eaten a hearty meal, and attempts to remove the foreign body under anesthesia offers the danger of nausea and vomiting, with resulting infection of the air passages. I think ten to fourteen hours should elapse before any attempt is made, unless there is definite obstruction interfering with the air passages. Secondly is the length of time necessary in the removal of a foreign body. Dr. Jackson used to teach that we should not work on such a patient for more than thirty minutes at a time, that if it is not removed in that time the patient should be sent back to the ward until the next day, or later depending upon the reaction. Coins as a rule are not difficult to remove as they generally lodge at cryco pharyngeus constriction, but safety pins and also straight pins offer great difficulty.

Dr. Thomas S. Clay, Savannah: One little point of interest that applies more particularly to the question of diagnosis for the general practitioner, particularly those who are not directly in touch with an x-ray laboratory. I recall a case that occurred several years ago in my general practice. I was called to see a young man suffering with a chest condition which was apparently tuberculosis. Great quantities of fluid were being coughed up, he had a high temperature, along with other general symptoms; but several examinations of the sputum failed to reveal anything. The patient was kept in bed, the temperature declined, and he returned to work. In the winter he took a little cold and the same symptoms recurred to such an extent that it looked as if he would drown in

the quantity of fluid brought up from his chest. This was before the days of the x-ray and I conceived the idea of draining the boy's chest. I elevated the foot of the bed until I had him standing almost on his head in an effort to drain the chest and get rid of the contents. About two days later, after he had carried out my instructions carefully of remaining on his side without raising his head and body in coughing out the fluid in the chest, the temperature improved rather rapidly and when I went in one morning he said, "Show Doctor what I coughed up last night." The mother gave me a cone-shaped thing covered with calcareous deposit. I cut this open and found a tack which he had known nothing about and which had become encysted. When you know a foreign body is in the chest it is easy to remove it, but the question of diagnosis comes up and I would suggest to the men who are out of touch with the x-ray, that when a condition of the chest comes up with simultaneous bronchiectasis that they should examine carefully for a foreign body, getting a careful history. In the first instance this young man apparently recovered following the rest in bed, but later the condition redeveloped, when later the tack was coughed up with final complete recovery. I think an x-ray examination is of great importance in these cases.

Dr. Francis B. Blackmar, Columbus: I am greatly indebted to the Doctor for his presentation. Dr. Clay just made a point that I think should be emphasized. It is the fixed foreign bodies that are the most dangerous, but the moveable ones worry the patients most. The Doctor spoke of not slapping the patient and that reminds me of the story of the internist who called up a throat specialist and said he had a foreign body case. He asked if he should throw the child over his shoulder to get it out, and the specialist told him, "No, give it morphine and it may keep it until I get there."

Dr. Frank K. Boland, Atlanta: We are greatly indebted to these men who are capable of doing this work, and it does not seem necessary to go to Philadelphia any more to have it done. The thing I wish to mention particularly is a very rudimentary and crude method of removing these foreign bodies, which I have heard Dr. Westmoreland describe. That is, the administration of strychnine in large doses, repeated often until the patient had convulsions and coughed the foreign body up. I have heard Dr. Westmoreland say that he has recovered several foreign bodies in this way.

Dr. Murdock Equen, Atlanta, (closing): I want to thank the gentlemen for their kindly discussion.

The bronchoscope and the esophagoscope are not confined to the removal of foreign bodies. The diagnostic field is opening up more and more. Carcinoma of the lungs is frequently diagnosed by the bronchoscope, and we are aided in seeing many other conditions by this instrument. It is the general men who see these cases first, and it depends upon the early diagnosis whether the children develop pneumonia and other lung conditions. The objection to the movable foreign body is that it irritates the membrane. If one gives strychnine or slaps the child on the back the foreign body is likely to be caught between the vocal cords, and if there is an extreme spasm of the larynx the child is gone. Nothing will save it except a very rapid tracheotomy. A child was brought into the hospital dead after being brought in over a rough road and we found a grain of corn caught between the vocal cords. If the child had had morphine the foreign body would have stayed down. Any case of lung trouble in the absence of tubercle bacilli should be carefully examined for foreign bodies in the chest are very frequently seen. Dr. Bunce told me that he had a case of appendicitis in which the patient had swallowed a bean and it had become lodged in the appendix.

PARANEPHRITIC ABSCESS IN CHILDHOOD

J. S. Eisenstaedt, Chicago (Journal A. M. A., January 5, 1929), reports two cases of paranephritic abscess in childhood: one in a girl, aged 32 months, and the other in a girl, aged 12 years. Both were evidently due to trauma. The first child was admitted to hospital with a diagnosis of pyelitis. After a fall from her wheel-chair, while in the hospital under the care of her mother, she had an attack of vomiting and her temperature rose to 103 F. Eisenstaedt saw her about two and one-half days later and the left side of the abdomen was very tender to palpation and offered marked muscle defense. A mass was palpable in the loin which was continuous with the left kidney. At operation about two ounces (60 cc.) of thick, foul smelling, yellowish pus was evacuated. There was no exploration made of the kidney, so the presence of a cortical abscess was not determined. In the second case, the injury was sustained while sliding down a cellar door. In the fall the patient struck herself against the narrow edge of an open door, the injury being to her right loin.

CHRONIC INFECTION OF THE MAXILLARY SINUS*

Its Relation to General Medicine

WILLIAM C. WARREN, JR., M. D.

Atlanta

Only in recent years have the nasal accessory sinuses as a possible focus of infection taken their appropriate place in the realm of medicine. These very important structures are now classed with the tonsils, teeth, appendix, gallbladder, prostate, etc., and rightly so.

The maxillary sinus is perhaps the most important of all the accessory sinuses, especially is this true in children. First, because it is developed early; second, aeration and drainage difficult to maintain; third, larger and more extensive surface of lymph spaces for absorption.

In order to clearly understand why so great an emphasis should be placed here, let us review in a short space, touching only the salient points, the anatomy of the maxillary sinus. Always bear in mind that the mucous membrane lining, the nasal cavity and antrum is continuous—entering the latter through the maxillary opening at the bottom of the infundibulum which is located beneath the middle turbinate. This sinus is pyramidal in shape with the lateral wall as a base. The inferior turbinate divides it into half. The lower part being bony and the upper membrane and bone. The floor is convex, the lowest point being opposite the first molar, then second bicuspid. The first bicuspid and second molar are also in relation to the antrum in many cases. The anatomical variations between the teeth and antrum are:

1. Layer of bone between alveolar process and sinus may be thick or thin.
2. Roots of teeth may touch floor of sinus.
3. Roots of teeth may enter sinus covered by mucous membrane only.

A purulent discharge from the nose may result from that which has been first serous, mucoid or muco-purulent, or it may have been purulent from the beginning. Staphylococci, streptococci and pneumococci are frequently associated with the micrococcus catarrhalis. Even the influenza bacillus may be found. When the purulent discharge persists longer than it should if it were the result of an ordinary cold, and especially in cases in which it is so acrid as to produce superficial excoriation and soreness of the edges of the nostrils and upper lip, diphtheria bacilli will be present more often than expected. Nasal diphtheria is difficult to diagnose without the aid of the laboratory. The same applies to two very rare purulent lesions of the nose; namely, those due to gonococci and glanders.

Chronic purulent nasal discharges are mostly due either to lesions of the mucous membrane or to the emptying into the nose of purulent collections from the antrum, frontal, ethmoidal or sphenoidal sinus, or from necrosis of the nasal bones. The diagnosis may be obvious enough, but very often it is by no means easy, especially in cases where the mucous membrane has undergone a hyperplastic change and there is only a thin watery discharge from the nose. The latter may also be indicative of a polypoid degeneration, and the X-ray may or may not show this thickening.

Many cases will not give a history of a chronic nasal discharge and the nose may be entirely free from pus on examination, but this does not mean the patient hasn't an antrum infection. Often the chief complaint will be a chronic cough worse upon arising, asthma, or it may be a post-nasal drip which bothers the patient more than anything else. Frequent colds and seemingly lowered resistence against same is a common symptom. Then again one detects an offensive odor from one or the other nostril, and relates this story first and foremost. In order to make an accurate diagnosis in any maxillary sinus case, a careful history is required, likewise a thorough physical examination on more than just one occasion, exclusion of all other sinuses to your own satisfaction, transillumination, X-ray, and a diagnostic intranasal puncture and irrigation if necessary.

*Read before the Medical Association of Georgia, Savannah, Ga., May 11, 1928.

Because lymphatic absorption from the nasal sinuses is by way of the submaxillary and internal jugular nodes, the lymph ducts, the great veins, the right side of the heart and lungs, and the bronchial and mediastinal glands, one should expect chest complications more than any other systemic disease. However, we find secondary infections throughout the body. When these systemic diseases are due to bacteria, toxins, or both, from a focus of infection in the antrum, they cannot possibly be cured if this focus is not eradicated.

CAUSES OF EMPYEMA OF THE ANTRUM

1. 10% of all cases due to caries of the teeth and nearly always accompanied by an offensive odor.

2. 90% of all cases due to influenza and repeated colds and usually accompanied by an odor *only* when *chronic*.

The treatment of maxillary sinus infection in adults varies somewhat from that in children. In the former, surgery alone is sufficient; but in the latter, a great deal of attention must be paid to the *diet*. Always give the foods high in fat soluble A vitamin, such as butter, milk, eggs, carrots, spinach, lettuce and tomatoes. In addition, give cod liver oil in *every* case and expose the child to sunlight whenever possible.

Success depends upon the complete eradication of all foci of infection, free drainage and proper ventilation; which re-establishes a healthy ciliated epithelium in as short a time as possible. This is a most important factor in maintaining a normal sinus condition. Nasal surgery in its beginning erred on the side of extreme conservatism. With the introduction of cocaine and adrenalin giving us anesthesia and hemostasis, the era of radical nasal surgery was inaugurated. Now the pendulum appears to be gradually swinging towards conservatism. The word conservatism is an evasive one, and means different things to different men. What is conservative nasal surgery? Naturally, that which is necessary to remove pathology or that which will re-establish anatomic physiological relationship towards that end with the minimum of trauma to and destruction of normal tissue.

Hajek laid down a basic principle in sinus surgery when he said: "The accomplishment of free drainage is all that is necessary to effect a cure, and it remains in every case the conditio sine qua non of beginning therapy." Its logic is that of common sense. Intranasal punctures and irrigations will give the desired results in the majority of cases. This may be followed by a large intranasal opening into the antrum below the inferior turbinate if the first line of treatment fails, and as a last resort a Caldwell-Luc or Denker operation performed. The latter is very seldom necessary and resorted to usually in cases of polyposis.

CONCLUSIONS:

1. Latent or chronic infection of the sinuses is not uncommon in adults and children.

2. Systemic diseases are often secondary to chronic infection of the sinuses.

3. Suspected cases should be under the observation of a specialist.

4. A negative opinion in suspected chronic sinusitis should only be given after repeated examinations.

5. The treatment of chronic maxillary sinusitis is surgical and depends upon proper aeration and drainage.

REFERENCES:

Daland: Annals of Otology, Rhinol, Laryngol. 35. 1064-1072. December, 1926.
Lierle: Annals of O. R. L. 35. 544-548. June, 1926.
Mullin: J. A. M. A. 87. 739-741. September, 1926.
Hajek: Nasal Accessory Sinuses. Vol. 1, p. 161.
618 Atlanta National Bank Bldg., Atlanta, Ga.

DISCUSSION ON PAPER OF DR. WARREN

Dr. W. H. Cabaniss, Athens: Most of my remarks will be in the nature of emphasis on what the essayist brought out so well. I wish to emphasize particularly that the term "nasal catarrh" is a misnomer. It may range all the way from a deviation of the septum to atrophic rhinitis, and we very frequently find that the so-called catarrhal patient has a sinusitis. As the essayist said, the maxillary sinus is most frequently affected, probably because of its direct connection with the teeth, whereby an infection can take place from an infected tooth and also because the maxillary sinus does not drain out or empty itself unless the patient bends over or gets into such position that gravity will drain it. I think this is the most frequent cause of maxillary sinus trouble.

As Dr. Warren said, the antrum is most frequently affected in his experience. Skillern says that 25 per cent are due to infection from the teeth. My own experience, like that of Dr. Warren, is that many of the cases are due not to the teeth but to the influenza bacillus infection. As an aid to diagnosis, neither pain nor discharge may be present in such degree as to be noticeable. In acute cases there may be a good deal of pain, and, as Dr. de Schweinitz brought out, one of the most frequents points of pain is over the eye on the side of the affected sinus. Also, patients come in with a sensation of a foreign body in the eye, and those things will throw you off unless you make a very careful examination. It is not infrequent for patients to be treated for eye discomfort when the condition is really located in the maxillary sinus.

One other thing is that in every case in which we have suspected foci of infection, the nasal accessory sinuses should always be carefully examined, because pain and discharge may not be present in sufficient quantity to draw attention to that source of infection.

Dr. Francis B. Blackmar, Columbus: I was especially glad to hear this paper, for hardly a month passes that the dentist does not, in searching for focal infection, say that there cannot be focal absorption from the antrum. I do not know where that idea came from, but it is very prevalent particularly among dentists. If we can put a stop to that idea it will be a good thing. I like to tell my patients, especially those who do not believe in evolution, that the sinuses of the head, I think, are built for walking on all fours, and that we have a lot of sinus infection since we have persisted in walking on our hind feet only. This throws the drainage out of order. If we walked on both hands and feet the openings to the sinuses would all be where nature intended them to be, at the bottom. If the ethmoid sinus and the antrum are both affected we have to resect the middle turbinate first, granted that we cannot cure the antrum infection by a reasonable number of irrigations. This permits you to use a Yankaner cannula through the natural opening without pain. I have had some success with the rubber retention catheters inserted into the nose. The patient can then irrigate his antrum three times a day if necessary. In some cases this has made an antrum operation unnecessary, where I thought it would be necessary. Ephedrine is proving valuable and does not have the disagreeable reactions of adrenalin. By combining it with neosilvol we get a very happy result in the nose.

I do not think the maxillary sinus is quite as much of a trouble maker as we sometimes give it credit for being. As we become more experienced, I think we find more and more sphenoid trouble, the sphenoid pours its secretion out over the nasal ganglion which irritates it, and the pain its referred to the eye and the antrum region. I think in many cases we would do well to consider the sphenoid sinus more than we do.

Dr. William C. Warren, Jr., Atlanta, (closing): As you saw, I read this paper chiefly to try to get better cooperation between the internist and specialist. It is not scientific enough for the specialist, but I was trying to make things plain to the general practitioner, and was trying to emphasize the frequency of sinus disease in children.

As to diet, in this connection a Dr. Dean, in Iowa, ran two wards of twenty-five beds each. In one ward they did not feed any vitamin A at all, and in the other fed it to the limit. In the ward where the children received vitamin A to the limit they had no case of sinus infection, but in the other ward the cases ran anywhere from 80 to 90 per cent of sinus infection. This is quite conclusive evidence of the effect of diet in these cases.

I have seen many cases in which there was a complaint of a nasal dripping and early morning cough. I have likewise had several cases in which a bronchitis has existed for a long period of time, bordering on bronchiectasis. If these patients are examined carefully we very frequently find evidence of a chronic infection of the antrum extending over a period of a year or more.

I wish to thank the gentlemen for their able discussion of my paper.

FRACTURES OF CLAVICLE

The clavicle is one of the most frequently broken bones in the body. Statistics show that from 5 to 10 per cent of all fractures occur in the clavicle. E. L. Eliason, Philadelphia (Journal A. M. A., Dec. 22, 1928), believes that ambulatory dressings for fracture of the clavicle are generally unsatisfactory as regards comfort and anatomic perfection, although function is almost universally all that could be desired. The multiplicity of methods points to the unsatisfactory state of such fixation. The recumbent methods which take cognizance of the necessity of a scapula flat on the chest will give the best results anatomically as well as functionally. Complications other than associated bony lesions are very rarely due to the fractured bone itself. Open reduction is seldom necessary. It is the man behind the splint that counts.

NAUSEA AND VOMITING OF EARLY PREGNANCY*

O. R. THOMPSON, M. D.
Macon, Georgia

Nausea and vomiting of pregnancy, the symptoms the multipara in later years holds in her memory and the expecting primipara looks forward to, often cause the attending physician much worry and a longing for the time when the biologist, biochemist or physiologist will come to the rescue by determining the true etiology, so that this treatment can be directed scientifically.

The most plausible and popular theories advanced seem to show the effect and not the cause of the pathology. Since about fifty per cent of pregnant women suffer from the discomfort, the cause must be sought in some factor commonly present in normal pregnancy. The theories most popular and upon which the treatment is based, are:—the theory of the absorption of the products of gestation, the endocrine theory, and the metabolic disturbance, resulting either from deficiency of carbohydrates or deranged carbohydrate metabolism.

DeLee recognizes four distinct classes: (1) Those in which the vomiting is a reflex from the genitalia; (2) when it is due to some disease of the stomach, some abdominal disorder, or abnormal condition of the blood; (3) where the nervous system is at fault; and (4) where the general metabolism is disturbed, the clinical picture being that of toxemia. In hyperemesis he has two classes, the primary toxemia and the secondary toxemia. In the primary group he places the fulminating cases that present the clinical picture of acute toxemia, in the secondary group he places the milder forms of toxemia usually produced by starvation including dehydration.

Williams now believes that practically every case of vomiting rests upon a toxemic basis, and that variation in it scourse depends upon the severity of the toxemia, or to the decreased resistance to its action on the part of the woman. The toxemia in a great majority of cases acts merely as a predisposing cause in neurotic women. He now considers reflex vomiting as a subdivision of the neurotic type.

Veaux considers that there is "a hysterical or neurotic substratum often in evidence through the numerous spontaneous and induced stigmata and symptoms of these conditions. Reflex excitability is also a powerful factor in determining the paroxysms of vomiting, and we therefore sometimes find evidence of a casual connection between various lesions and malpositions of the uterus and emesis." He holds that in essential vomiting of pregnancy, there are two types; namely, autotoxic and non-toxic. In the autotoxic type there is a decided manifestation of the toxemia of pregnancy, as shown by the clinical symptoms, and unless relief can be obtained promptly, death occurs within a few days. In the non-toxic or inanition type the vomiting lasts for several weeks, and unless the physician is able to control the emesis the patient dies purely from starvation.

Tweedy also recognizes the three types, neurotic, reflex and toxic.

The leading authorities agree that there is a definite toxemia present in some of the cases of hyperemesis gravidarum and it is entirely plausible that there is some element of toxemia present in every case. About fifty per cent of pregnant women are affected with some degree of nausea and vomiting, showing that the true etiology is present in normal pregnancy. The escape of some mothers is probably due to the equilibrium of their nervous system or their power to effectively counteract the toxins by their own immunizing efforts.

In discussing the causes of hyperemesis, DeLee, states that "one must not lose sight of the generally increased nervous excitability of pregnancy, which would tend to exaggerate the action of any irritant located at any part of the body. Uncontrollable vomiting is more common in neurotic, neurasthenic, and hysteric women, but it is particularly likely to develop if there is some irritant which may act on the stomach via the nervous system or blood."

The toxin or toxins present in toxemia

*Read before the Sixth District Medical Society, Indian Springs, Ga., July 6, 1927.

of pregnancy have not been isolated, and therefore the treatment must be directed toward their effects and their elimination and not against the toxins themselves.

The clinical picture present in hyperemesis is that of starvation and dehydration in the prolonged or chronic cases, and profound toxemia without dehydration and emaciation in the acute or fulminating type. "Unfortunately the severity of the vomiting gives no clue as to whether one is dealing with the neurotic or toxemic type. Toxemic vomiting may occur in either an acute or chronic form. In the former the disease pursues a rapid course, and the patient, after a few days of ordinary vomiting, may begin to eject coffee-ground vomitus, soon passes into a somnolent or comatose condition, and dies within a week or ten days without emaciation. In the latter, and more frequent variety, persistent vomiting may continue for weeks, the patient becoming markedly emaciated before the seriousness of the condition is appreciated. Later she begins to vomit coffee-ground-like material, which she ejects in large quantities and without apparent effort. The behavior of the pulse is not constant—in some cases it soon becomes rapid and thready while in others it is scarcely accelerated." (Williams).

Examination of the blood reveals a diminution in the alkali reserve, lowering of the carbon dioxide combining power and rarely lowered sugar. The urinary changes, other than those due to dehydration, are an increased ammonia coefficient, decreased urea output, and the presence of ketone bodies. Toward the terminal stage of the disease, the urine becomes greatly diminished in amount, and contains albumen, casts and even blood.

The mild cases, those that show more or less nausea with some vomiting are best treated by the adoption of suitable hygienic and dietetic measures. Proper exercises, occupation, amusement and rest are essential. Toast, hard dry biscuit, or popcorn, eaten the moment the patient awakens and before raising her head from the pillow will often relieve the distressing discomfort of morning sickness. The food during the day should be arranged so that the patient gets six small meals instead of three large ones. Thorough intestinal elimination must be maintained. In the mild type the use of sedative drugs is rarely necessary, but should the condition become more severe, luminal-sodium, given in one grain doses about thirty minutes before each meal, has in my practice, been of great value in helping the patient retain her nourishment.

Luikart reported in the American Journal of Obstetrics and Gynecology, 1923, the successful treatment of two cases of pernicious vomiting with luminal-sodium, after other methods had failed. This report stimulated my interest in the drug and since that time I have used it with success in more than fifty cases, varying in degree of severity. In mild cases the Elix of Luminal should be given in two dram doses before each meal, while in the more severe cases the tablet of luminal-sodium, given in one half to one tablet one hour before meals will allay the nausea and vomiting, and permit the ingestion and assimilation of food. In the pernicious type, when the patient is unable to retain anything by mouth, the drug must be given hypodermatically. Care should be taken in making up the injection to use the pure powder dissolved in cold sterile water. Should the patient become a day sleeper and complain of wakeful nights, caffeine sodium benzoate should be administered with the luminal. The caffeine does not seem to interfere with the quieting effect of the luminal on the nausea. The only untoward effect of luminal observed in my experience, was one mild case of urticaria.

Miller reported having met with unqualified success with the use of luminal-sodium in ten cases of vomiting of pregnancy that had been refractory to simple measures. Carter, in his treatment of hyperemesis, uses luminal-sodium hypodermatically in conjunction with ovarian extract, adding glucose and insulin according to the methods suggested by Titus and Thalheimer.

Luminal is not an immediate cure for hyperemesis, but due to its sedative and antispasmotic action the patient is able to retain and assimilate food, thus preventing starva-

tion and the establishment of the vicious cycle often present.

Since the majority of our cases of nausea and vomiting are of the neurotic type, the physician must not forget his power of suggestion, being sure of himself and holding the explicit confidence of his patient; the desired results will usually follow.

Carbohydrates have been used for years in the relief of nausea and vomiting. Believing that there must be some physiologic basis for this, Titus and his co-workers began their studies to explain, if possible, what must otherwise remain an empiric treatment. After studying the work of Underhill and Rand, and Ewing, who demonstrated in 1910 that in hyperemesis gravidarum there is an underlying disturbance of carbohydrates metabolism and storage, also the work of Duncan and Harding, who were convinced that "in early toxemia of pregnancy the dominant factor is a metabolic one" due largely to a carbohydrate deficiency, Hoffman, Gives and Titus, after their own researches came to the conclusion that the carbohydrate deficiency during pregnancy was of two-fold origin: (1) a relative deficiency due to an unexpected demand for glycogen on the part of the fetus and growing uterus, and (2) an actual deficiency, augmented in the presence of nausea and vomiting, from lessened carbohydrate intake.

The physiologic basis for the use of carbohydrates in hyperemesis gravidarum, according to Titus and his co-workers is found in the changes present in the liver. "The liver is the carbohydrate storing organ of the body, its cells being filled with glycogen, and a carbohydrate deficiency in the maternal organism causes a glycogen depletion of the liver. The liver is always affected in fatal cases of toxemia, showing areas of focal necrosis: it is the glycogen or sugar storing organ, and is also known to be the great detoxicating organ of the body. It functions less powerful in the latter respect if depleted of its sugar, as is proved by the fact that an animal starved of carbohydrates may be killed by a smaller dose of any poison than is required for a smaller animal that has been well fed."

Lowered intake with extra fetal consumption constitutes an actual starvation, and upon this, Titus bases his treatment, giving forced carbohydrate feedings in the mild cases, while in the severe or pernicious type he recommends the giving of 25% glucose solution intravenously.

Thalheimer was the first to combine insulin and glucose in the treatment of hyperemesis and observed that following its use there was a more rapid eradication of the ketonuria and acidosis. He claims that there is established in these patients a vicious cycle of acidosis causing vomiting, of a starvation type, and that insulin helps to break this cycle by forcing the body to oxidize the administered glucose, which in turn causes the burning of the products of incomplete fat metabolism. This reduces or eliminates the ketonuria; the lowered blood plasma carbon dioxide combining power is raised, and this removal of the acidosis eradicates the chief cause of the severe nausea and vomiting.

Some of the authorities object to the stand taken by Thalheimer and his followers on the ground that a deficiency of blood sugar has not yet been demonstrated by a single observer and that therefore the introduction of insulin with glucose is illogical if not actually dangerous. Harding and Van Wyck consider that "the use of insulin to abolish ketonuria is unnecessary unless the production of acetone bodies becomes so great, or their elimination becomes so impaired that a condition of true uncompensated acidosis may occur and the patient pass into coma. In this case the insulin should be used to combat the coma or impending coma, and not the pernicious vomiting per se. Successful treatment of pernicious nausea and vomiting with insulin and glucose has been reported by Thalheimer, Carter, Miller, Waters, Levy, King and many others.

Harding and Van Wyck consider that dehydration is responsible for the clinical and laboratory findings in pernicious nausea and vomiting, and that the best laboratory guide for treatment is the observation of the daily excretion of urine. The cases which respond successfully to their thereapy show, coinci-

dent with improvement in clinical condition, a greatly increased volume of urine with lowered specific gravity. Glucose is considered secondary to fluids and in their treatment, use 1000 c.c. of 5 per cent glucose solution in 1 per cent saline given intravenously each day until diuresis is obtained.

The treatment of pernicious vomiting, with which I have obtained unqualified success, is based upon that outlined by Titus. Hospitalization and isolation is absolutely essential to obtain success. Nothing is given by mouth for 48 hours. Saline Enema daily. 1000 c.c. of 10 per cent glucose solution is given intravenously per day. Enteroclysis of 200 c.c. of 5 per cent glucose solution should be given every three hours during the day. My results with luminal-sodium have been so favorable that I now use is hypodermatically instead of bromids and chloral by bowel. After 48 to 72 hours the vomiting has usually stopped and the patient is given a dry diet which consists of cereals, toast, crackers, potatoes, lean meats, etc. A small amount of easily assimilated liquids is allowed at intervals. The patient will often retain the food she wants much better than that you try to make her take. Fat ingestion should be kept low. There cannot be any set routine, each case must be individualized. When the patient begins taking food the intravenous injections of glucose should be stopped. The rectal instillations should continue for at least another day. Luminal-sodium grains 1 is now given by mouth, one hour before each meal, and continued as long as there is any evidence of gastric irritation. By the end of a week, both nausea and vomiting have usually disappeared, diuresis well established, the patient is on regular diet and ready to leave the hospital.

Abortion is usually unnecessary in the neurotic type. In the acute, fulminating, toxic type the operation is occasionally deferred too long, the patient becoming so ill that death is inevitable, no matter what is done.

Conclusion

The true etiology of nausea and vomiting of early pregnancy remains a secret. However, the chemical picture, laboratory findings and results obtained by the treatments now in

(Continued On Page 48)

STUDIES ON THE WASSERMANN TEST

II. *Influence of the Antigen*

PAUL EATON, M. D.
FRED L. DAMREN, B. S.
Augusta

In considering the results of a test which is so delicate as the Wassermann test it is not to be wondered that differences of opinion arise. As this is being written the Journal of the American Medical Association publishes a couple of letters asking whether the Wassermann reaction is a true complement fixation reaction and whether it is specific for syphilis. Editorially the questions are answered thus: That the reaction is not a true complement fixation reaction, but that it is specific for syphilis. The latter part of this answer leaves room for doubt. The test may be specific for syphilis in the sense that it is positive only or chiefly in the presence of substances connected with syphilis but it is definitely not specific for syphilis in the sense of being performed with materials directly related to syphilis. All of which reminds one of the classic definition of a crab as "a red insect that walks backwards."

Variations in results obtained in different laboratories in tests performed on different portions of the same sample of blood have led to criticisms of the test. One frequently hears it said that no two laboratories give the same results on portions of the same sample of blood. This criticism is hardly just. It is true that there are discordant results obtained in the use of the test but they are few in number compared to the whole number of tests performed.

The technic used in our laboratory involves the use of two antigens. Each sample of blood serum submitted is subjected (1) to a test with cholesterinized alcoholic human heart extract, with fixation in the water bath at 37 degrees for 40 minutes, and (2) to a test with an acetone insoluble antigen with fixation for four hours in a mechanical refrigerator whose temperature is very closely regulated to + 5C. The final

reading in each instance is made after the tubes have stood over night in this ice box. The reason for this difference in fixation is that we hope to overcome the excessive sensitiveness of the cholesterol antigen by using the less efficient water bath fixation and to bring up the less sensitive antigen by the use of the more efficient method of fixation, thus bringing their results closer together.

In the twelve months during which this technic has been in use in our laboratory (Nov. 1, 1926 to Oct. 31, 1927) 8800 specimens have been submitted to the laboratory for the Wassermann test. In some instances these samples have been unfit for use; in other instances there has been an insufficient quantity for two tests; and in a very small number of cases specimens have been lost through accident; 223 specimens have been anticomplementary. After all these exclusions we have been able to perform our tests with both antigens on 8462 specimens. We submit the following table as an index of the closeness of agreement between tests performed in the two methods described.

TABLE I
November, 1926, to October, 1927, Inclusive
Cholesterinized Antigen

ACETONE	=	±	+	2	3	4	T
=	5897	260	141	99	66	16	6479
±	24	22	23	24	35	22	150
+	16	8	28	22	29	15	118
2	20	8	16	28	38	33	143
3	17	4	10	19	68	143	261
4	16	7	3	14	49	1222	1311
T	5990	309	221	206	285	1451	8462

When one considers that the reading of the test depends on human judgement as to the amount of hemolysis in a suspension of red cells, perfect agreement is a little too much to ask for. Still it will be observed on inspection of the table that in 7265 of these 8462 tests (85.85%) there was perfect agreement. That is to say, in 5897 instances the reading in both tests was straight negative; in 1222 both readings were four plus, etc. Any person who has had experience with the test, however, will agree that if one test is negative and the other a plus minus the agreement is practically perfect. Indeed, very few would quarrel with us if we should include the one plus reading in this practical agreement. Similarly if one test gives a four plus and the other a three plus there is practical agreement. On this assumption (which you may restrict or expand as you choose) we have drawn the heavy black lines in the table and calculated the percentage of practical agreements; that is to say, the ratio of all the numbers within the black lines to the total. This percentage of practical agreement was 92.70%.

It will be noted that the upper right hand corner of the table is heavier than the lower left hand corner. According to our ideas of the relative sensitiveness of an antigen fortified with cholesterol this is as it should be. There may be some false positives up in this right hand corner. We hope not.

In reporting results of the test we strike an average between the reading from the two antigens. Thus the 16 specimens giving a four plus with a fortified antigen, against a negative with the acetone insoluble were reported as one plus, etc.

As a matter of curiosity rather than of practical interest the coefficient of correlation of this table was calculated according to the method of Pearson and was found to be + .94 + .0035.

The purpose of using these two antigens with different methods of fixation is of course to get a fair average. It is well known

TABLE II
EXPERIMENT II
Cholesterinized Antigen
Water-Bath

ICEBOX	=	±	+	2	3	4	T
=	346	0	0	0	0	1	347
±	0	2	0	0	0	0	2
+	4	0	0	0	0	0	4
2	4	0	2	3	0	0	9
3	5	1	2	3	8	1	20
4	8	0	4	6	12	77	107
T	367	3	8	12	20	79	489

A C—11.
Ice-box stronger—51
Water-bath stronger—2.
Absolute check 436—89.14%.
Practical check 454—92.84%.

that the cholesterinized antigen is very sensitive, sometimes too sensitive. It is believed that ice box fixation increases the sensitiveness of the test. It will be seen that the use of the cholesterinized antigen with water bath fixation combines the more sensitive antigen with the less sensitive method of fixation, while the use of the acetone antigen with the ice box fixation combines a less sensitive antigen with a more sensitive method of fixation. In order to prove this belief we have extended our routine tests on 500 samples by performing an extra test with a cholesterinized antigen and using ice box fixation. In another series of 500 specimens we have used an extra test with an acetone insoluble antigen with water bath fixation. The results of these tests are shown in Tables II and III. It will be noticed that these

TABLE III

EXPERIMENT III

Acetone Insoluble Antigen

Water-Bath

		—	±	+	2	3	4	T
I	—	380	0	3	0	0	0	383
C	±	0	0	0	1	0	0	1
E	+	4	0	1	0	0	0	5
B	2	2	1	0	0	0	0	3
O	3	6	1	2	0	2	1	12
X	4	7	1	1	3	7	61	80
	T	399	3	7	4	9	62	484

A C—16.
Ice Box stronger—35.
Water-bath stronger—5.
Absolute check—444—91.73%.
Practical check—453—93.59%.

tables corroborate the ideas put forth above. One cannot fail to notice that the test is not always consistent, that is to say, when 500 samples were tested by using the same antigen with two different methods of fixation, the results checked each other absolutely in only 89%, and practically in 93%, and the acetone insoluble antigen gave only very slightly closer checking. When we remember that in these two series of 500 tests apiece, the tests on the same sample which were balanced against each other were performed with the same antigen the same hemolysin and complement and by the same persons, one cannot fail to be impressed with the fact that there must be some factors as yet unknown which influence the results given by the Wassermann test.

OBSERVATIONS IN EUROPEAN CLINICS*

SHELLEY C. DAVIS, M. D.
Atlanta, Ga.

I have been requested to give a little talk on my observations while in Europe, and will endeavor to bring out some of the outstanding differences between European and American surgery in the treatment of similar conditions.

The major part of the work is done in hospitals and clinics under government supervision, and many of the surgeons spend a great part of their lives as assistants to the chief, waiting until death or old age retires him, and the man next in line is able to attain the exalted position of "Chef du Clinique."

Most of the hospitals are old and cling to the old traditions of famous predecessors, and one may wander into the Hall of Amboise Pare or Desault or Tenon (1724-1816) or Winslow (1669-1760), the Pasteur Institute (1822-1895), or the Hall of Dupuytren (1777-1835) or Velpeau (1795-1868) or Nelaton (1807-1874) or Laennec (1781-1826) or Broca (1824-1880) or Charcot's Clinic, or that of Brown-Sequard and many others, and be impressed by the sincerity and reverence that the chief speaks of illustrious men that have gone before and the desire that sometimes he may be remembered in a similar manner.

In most of the clinics ether is used entirely, and in Paris the anesthetic is administered by a partial re-breathing machine, while in Vienna the open drop method is used. Gas oxygen is employed to a small extent in Paris, and when used it is administered by a crude machine consisting of the two tanks connected to a bag and mask, and there are no dials or indicators to tell the per cent. or quantity of gas used.

One of the noticeable differences in Paris was in the treatment of appendicitis. The usual procedure of Dr. de Martel, one of the noted surgeons of Paris, was to operate an acute case immediately, if seen within 14 or

*Address before the Fifth District Medical Society, Decatur, Ga., Aug. 3, 1928.

16 hours after the onset of the attack, and if seen after this time and the appendix had not ruptured the patient was put to bed with an ice-cap to the abdomen constantly, and put on fluid diet, and W. B. C.'s made every few days to check up on the progress of the inflammation, and the patient was not operated until temperature and W. B. C. were normal. Usually the patient was discharged and told to return within six weeks or two months for operation. Dr. de Martel stated that if the appendix had not already ruptured before 18 hours there was very little danger if a rupture after this time, and that the danger to the patient lay in operating and disseminating the organisms that were held in the inflammatory re-actionary zone that walled off the appendix.

If the appendix had ruptured, and peritonitis had set in when the case was seen, operation with drainage was performed.

If an appendiceal abscess had formed it was opened when the temperature and W. B. C. showed a decline and indicated pus formation.

The treatment of malignancies of the cervix and uterus in Vienna is by relying mainly on surgery, and may or may not be supplemented by radium and X-Ray therapy. In the Frauen Kraukeuhaus in Vienna the old clinics of Wertheim and Schauta are still existing under the names of their successors, Kermamer, and Peham, and the rivalry between the two schools advocating the abdominal and vaginal extirpation of the uterus and parametrium is probably as strong as in the days of the old masters.

In France at the Radium Institute of the University of Paris, as at the Memorial Hospital in New York City, radium therapy alone is used, unless contra-indicated because considered dangerous or inefficient, as:

1st—In those cases known to be radio-resistant.

2nd—Malformations of the uterus or vagina that will not permit the proper application of radium.

3rd—Considered dangerous when complicated by adnexal inflammation. An attempt may be made to suppress the inflam-

(Continued On Page 48)

CHOREA*

A DANGEROUS COMPLICATION OF PREGNANCY

Report of a Case Treated With Caesarean Section

JOHN A. HUNNICUTT, JR., M. D.
Athens

There are perhaps few of us who obtain from the expectant mother a complete history of past illnesses.

Past history of disease may be useful in preventing some of the grave complications which might arise during the course of pregnancy.

A pregnant woman who gives a past history of chorea should receive immediate attention. Pregnancy favors a relapse in previously choreic individuals and the attacks are most common during the third month of the first pregnancy in women less than 25 years of age.

An infection with the streptococcus or streptodiplococcus is thought to be the cause of chorea. The teeth and the tonsils have been called the portals of entry to the body for streptococci which are held responsible for endocarditis, acute articular rheumatism and chorea.

Therefore a pregnant woman giving a history of previous attacks of chorea should have the teeth and tonsils eliminated as causative factors in the production of chorea. Choreic patients are often relieved of attacks by having diseased tonsils removed.

Fortunately chorea is one of the rarer complications of pregnancy. When present the prognosis is most unfavorable and the disease persists until the uterus is emptied and may continue into lactation.

The principal symptoms of chorea are: spontaneous movements, ataxias, weakness and psychic changes. Speech is involved in about 25 per cent of patients. Pharyngitis, tonsillitis, carious teeth, articular inflammation and later, cardiac complications may be present. Fever of a low grade develops in practically all cases.

*Read before the Eighth District Medical Association, Madison, Ga., August 8, 1928.

The following case is reported: The patient was 23 years old, a primipara, 8½ months pregnant and was suffering from all of the cardinal symptoms of chorea. She had had only one previous attack, 13 years before when I saw her in consultation with Dr. W. A. Carlton of Athens. The present attack had been in progress for six weeks. Her family physician had given her the benefit of modern treatment with no relief from her symptoms which every day increased in severity. The spontaneous movements were continuous and despite the judicious administration of sedatives the patient had not slept soundly for several days.

The pupils were dilated, tonsils large and inflamed with a mild grade of pharyngitis. Teeth in good condition. Her heart showed a slight enlargement with a rate of 126 to the minute. A soft systolic murmur was present, best heard at the apex. No signs of articular rheumatism. On account of extreme weakness, ataxia, and constant spontaneous movements of the arms, head and legs the patient was unable to walk or stand up by herself.

The fetal heart was heard in the left lower abdominal quadrant, 137 to the minute. The patient's temperature was 100.5 degrees. Her urine showed more than a trace of albumen.

On account of the severity of the symptoms the patient was sent to General Hospital at Athens. Despite the use of sedatives, cold and hot packs and confinement to bed at the hospital she became worse. The pulse rate arose to 150 to the minute, the albumen increased, the spontaneous movements of her hands, arms, head and legs became so constant that the patient had to be held in bed continuously. It was apparent that unless relief by some means was not obtained the patient would die of exhaustion.

Caesarean section under light ether anaesthesia was chosen as the most rapid procedure for emptying the uterus with a minimum amount of trauma to the mother and the child.

During the first 24 hours after operation the patient's symptoms became alarming and death from exhaustion seemed imminent.

(Continued On Page 48)

CANCER OF THE UTERINE CERVIX*

A Review of Two Hundred and Twenty-Two Cases

JOHN F. DENTON, M.D.,
Atlanta

The Steiner Clinic for the treatment of cancer and allied diseases opened its doors for the reception of patients October 1, 1924.

During the first three years of its existence 222 cases of carcinoma of the uterine cervix were seen and most of them given some form of treatment.

We realize that the time has been too short for us to offer any final conclusions as to the result of our treatment, but we believe that some lessons can be drawn from a review of these cases that may prove of some value, particularly to those who are called upon to examine only an occasional case with signs and symptoms indicative of cancer.

It may be well to state here that there are no characteristic signs and symptoms of cancer, the same symptoms may mean a simple, non-malignant condition.

The most predominant sign is bleeding, irregular bleeding; there may be a small amount between menstrual periods, an increased leucorrheal discharge streaked with blood, an increase in the menstrual flow or a sudden profuse bleeding. This is in the vast majority, if not in every case, not accompanied with pain. This cannot be too emphatically stated; it is most unfortunate that pain is not an early symptom. When it is present, the cause is usually an accompanying condition. To await this symptom is to condemn the patient to a death from cancer for only in advanced cases does it become a definite symptom.

The treatment given at the clinic is never operative, so we do not use the classification operable and inoperable, but classify them according to the extent of the disease, basing our classification on that of Schmitz. Our pathologist, Dr. Bishop, is now giving us a histological classification, according to the

*Read before the Medical Association of Georgia, Savannah, Ga., May 11, 1928.

Broders plan, whereby we can regulate to a certain extent our treatment and on which we can base our hopes for a cure; type (1) and (2) with their well differentiated cells offering the greatest hope; type (3) and (4) with their poorly differentiated cells the least hope.

We shall not enter into any discussion as to the relative merits of treatment by operation or by radiation merely stating that we use only radiation with radium and x-ray, thereby avoiding the primary mortality and subsequent morbidity of operative treatment, with certainly as good, if not better results.

In reviewing these cases we are rather appalled at the percentage of patients that can be put in the curable class, only 30 per cent, the largest number being in the absolutely hopeless class, about 40 per cent.

Who is to blame for this?

Many state that they thought the symptoms from which they were suffering meant only the "change of life," being thus told by some well meaning but ill advised friend, and occasionally by their doctor. In others there were no symptoms until the disease was well advanced, and sad to relate many state that their doctor had been giving them local treatment for many months.

The older textbooks and teachings are probably responsible for this, for practically every one began their discussion of cancer of the cervix by stating that the cardinal symptoms of the disease were "hemorrhage, pain and foul smelling discharge" not making it emphatic enough that these were signs only of advanced cancer. The more recent textbooks have corrected this, leaving this train of symptoms till the last of their description.

Another mistake that has been responsible for many of the cases being seen late in the course of their disease is that it is thought to be a disease only of middle life. While it is true that the majority of our cases are past 35 years of age, 11 are 30 and under, the youngest being 24. This is a low percentage, but a number large enough to warn us against dismissing a case as benign simply because of her age. One case was sent to the hospital with the diagnosis of pelvic abscess, "because she was too young to have cancer." A few months ago a woman only 22 was seen with the disease rather advanced. She was a nullipara as many of our cases are. Cases have been reported in the literature even younger, one case developing in childhood has been reported. Our oldest case was 77.

Cancer in one with a procidentia is very rare, yet we have had one such case at the age of 70. Another such case was seen in private practice, age 69 years. Both were treated with radium, and it is interesting to note that not only did all signs of the cancer disappear, but the procidentia was relieved also.

This was caused probably by the fibrous tissue that developed around the cervix and in the base of the broad ligaments from the action of the radium, which held the uterus up in place. This treatment might be used in cases of procidentia only, where surgery is distinctly contra indicated, though we have never tried it.

The gross appearance of a cervix with early carcinoma is not at all typical. Ulceration at an early stage is not common, and has to be diagnosed from a simple, tubercular or syphilitic ulcer, the latter two very rare.

The simple erosion occurs more frequently in younger women, while in older women, where fibrosis is beginning, there is more apt to be a cystic cervicitis.

A cancerous lesion bleeds very freely at the lightest touch, while the bleeding from an erosion is not so free and is more of a slow oozing from a broader surface.

Digital examination of a cancerous cervix shows it usually hypertrophied and nodular, particularly around the involved area due to the lymphocytic infiltration and production of connective tissue, nature's efforts to stop the progress of the disease. It is hardly necessary to add that this examination produces a free bleeding.

We cannot rely entirely on the gross appearance and feel of a cervix for a diagnosis of early cancer.

How then are we to arrive at a definite diagnosis in these early cases? There is only

one way, and that is by removing a section and having a competent pathologist examine it. At the Steiner Clinic every suspicious looking cervix has a biopsy done on it, and we have been rewarded by finding many innocent cervices where cancer was suspected and finding many early cases of carcinoma where it was not apparent. There is little, if any, danger of spreading the disease by removing a section, but, if one fears this, the edges of the cut surface can be sealed by means of a chemical or the actual cautery.

Two rather striking examples can be cited to prove the value of this procedure: One case which, to all appearances, was malignant, proved to be on section tuberculosis of the cervix, a rare condition; another case with marked leukoplakia had a section removed at her first examination. The report was leukoplakia, though with marked cellular activity. She was treated with the actual cautery. At the end of about six months the disease not responding to the treatment as rapidly as we thought it should, another section was removed, which proved to be definite carcinoma.

Every one of our 222 cases has had a section removed and proven cancer.

If it is true, and it is believed by the majority of gynecologists to be true, that the unhealed injuries of childbirth plus the infection that lodges in these unhealed areas, are definite etiological factors in the development of cancer of the cervix, then there is surely a prophylactic treatment.

No argument can be precipitated by stating that obstetrics is probably the poorest paid branch of the profession, yet we owe it to our patients to follow them long enough after the lying in period to see that these injuries heal. If treated within a few weeks after delivery, many will heal by the application of some antiseptic, if left alone and not treated until many months later, more drastic measures are necessary.

The actual cautery is our best instrument for treating these cases, and, where antiseptics fail to heal them, the actual cautery lightly applied will almost invariably do so.

Not only will the danger of cancer be lessened, but the backache and annoying leucorrheal discharge that often follow childbirth will be prevented, giving one a most grateful patient.

The postnatal care of an obstetrical patient is almost as important as the prenatal, certainly from the standpoint of preventing cancer, and should occupy a leading place in our obstetrical teaching. "What is worth doing at all is worth doing well," and when it is explained to patients the reason for many postnatal office visits, few object.

One more thing before going into the treatment and that is the care of the cervical stump, when a supravaginal hysterectomy is done. It is not mentioned to start a discussion on the relative merits of the complete and supravaginal hysterectomy; but to express an opinion that the body of the uterus should not be removed without some attention being paid to the cervix.

A small number of our cases have had cancer develop in the cervical stump, one as late as 15 years after the removal of the uterine body.

The method we use is as follows: Before the abdomen is opened the cervix is exposed through a speculum and by means of the actual cautery the cervical canal is literally reamed out, which should destroy the infection, if any, and the glandular area. If there are erosions or unhealed lacerations these are also thoroughly cauterized.

Examination of a cervix so treated several weeks after the operation will usually show a large firm fibrous nodule in the vault of the vagina.

Some are now recommending the application of radium before the patient leaves the hospital, which usually produces the same

We resort to the removal of the cervix in only an occasional case.

There is one hopeful sign to be noted and that is that more patients every year are applying to the clinic for examination, and, so, many are being relieved of pre-cancerous conditions and more cases will be seen in the early stage.

This should be indeed a cheering sign to those working for early diagnosis and treatment.

CARCINOMA OF CERVIX UTERI*

Report of Two Hundred Twenty-Two Cases

CALVIN B. STEWART, M.D.,
Atlanta

My aim is to very briefly discuss the radium treatment in this all too frequent malady, namely Carcinoma of the Cervix Uteri.

Our cases at the Steiner Clinic are all treated with radium and this is reenforced or supplemented by means of X-radiation. We do not consider radium an ideal treatment, for it is not. While radium cures a good per cent of early cases and a smaller per cent of the moderately advanced cases, and too, we can expect some relief from pain, odor, hemorrhage and discharge in the more advanced cases, it does not cure this group and in addition we still have a few cases that present themselves to any cancer clinic that are so advanced that if present treatment were applied, they would undoubtedly be made worse. This is the group to which we must look to the future for help in treatment.

For the above reasons all cases are classified into three groups before treatment is started. Group 1 is those cases in which we hope to establish a clinical cure. Group 2, those cases in which palliation can reasonably be expected, and Group 3, those that are moribund and in which any type of present treatment would only hasten the end.

We have our groups according to extent of disease as found on physical examination of the vagina and rectum. At this point, permit me to emphasize the value of a rectal examination, for by it, you frequently obtain much of your information. This information is not for making a diagnosis, but to help in directing the treatment and giving a prognosis to the family. The grouping then, is into four clinical classes.

Class One contains that small proportion of cases with the disease limited to the cervix. This is the class that is referred to, by the surgeons, as operable. In this class, we have placed cases that are more advanced than is the case in most clinics. We have been a little unfair to ourselves in doing so and of course our statistics must suffer.

Class Two is that small group that have extension from the cervix to the vaginal wall.

Class Three is that group in which we have placed the cases that have parametrial extension.

Class Four includes those cases that have the pelvis filled and fixed, and frequently spoken of as the frozen pelvis class. In this class we must contend with frequent encroachment of the disease upon the rectum, with pain from pressure on the sacral plexus and frequent pyelitis from obstruction to the ureters.

Treatment must necessarily depend upon the classifications. Our so-called curable group usually obtains six to nine thousand millicurie hours of radium in one week. In most instances no more radium treatment is necessary. Radium here, as in all other cases must above everything else, be brought into very close relation with the cells expected to be destroyed. The most effective and economical distance is not over one inch. For this reason, we apply radium against the cervix, into the cervical canal, and within the substance of the cervix. This is then followed immediately or within five weeks, by deep therapy x-ray to the pelvis. X-ray, we think has proven to be of distinct advantage.

In case of doubt, the patients are put into the curable group and given radical treatment. We take a chance on making them worse and bringing radiation into ill repute with the lay-people, and also a major proportion of our medical profession, rather than playing safe in the questionable cases and letting the unfortunates that might have a chance die of this horrible malady.

A typical favorable case is given:

(1) Heavily filtered radium against the cervix and radiating the parametria for 2,250 millicurie hours.

(2) In the operating room, under sterile precautions, the very small glass tubes containing radium emanation are inserted into the substance of the cervix at the base of the new growth, to remain indefinitely. Dos-

*Read before the Medical Association of Georgia, Savannah, Ga., May 11, 1928.

age is from 1,000 to 3,000 millicurie hours.

(3) At the same sitting the radium tubes filtered with platinum and rubber, are placed into the cervical canal for a dose of 2,000 to 3,000 millicurie hours. Care must be taken to pack the vagina in order to get the radium as far as possible from the bladder and rectum. These organs are very sensitive to radiation and must be protected.

(4) The treatment is then concluded by means of four x-ray treatments of the high voltage type. This is perhaps best postponed for three weeks to prevent a severe proctitis or cystitis.

There are many exceptions to the above plan of treatment. Two of which we feel are important enough to call to your attention now. First, young women, under 35 for example, usually have the excavating type of growths which invades deeply and are very disappointing as to the final outcome. The papillary type which fills the vagina usually does better than is first expected. Second, old women will not stand the heavy dosage that the women under 55 will. They are the ones in which sloughs are likely to occur and fistulas may develop if exceptional care is not used.

The very important and perhaps the most difficult part of our work is to get these cases back for observation. They are given a return slip before leaving the hospital and on the day they return, they are examined and if no trouble is found they are given further dates for observation. Our desire is to follow the patients as long as they live and then try to ascertain the date and cause of death.

We are reluctant in turning to the statistical part of our work, because of the difficulty in making it interesting and due to the fact that we are not attempting to present end results, but rather to acquaint you with the way that we are trying to cope with one of the difficult tasks that presents itself at the Steiner Clinic about every third day, and which is becoming more frequent as the years roll by.

Our records show that we have had 222 cases in our clinic in the first three-year period, beginning October, 1924. Of this number 50 were in Class 1, 10 in Class 2, 69 in Class 3, and 93 in Class 4.

Our follow-up notes show that only 121 of the 222 cases have been adequately followed, making 101 cases which are of no value in reporting. Of the untraced, 12 were in class 1, four in class 2, 26 in class 3, and 59 in class 4. Nineteen of the untraced group were not treated, and perhaps many others in class 4 would have done as well not to have been.

Of group 1, we have 37 of the 38 living, with no evidence of disease. This is taking no account of the 12 patients that were lost. Some of these untraced cases probably died of their disease, but having no record, are unable to report their progress after treatment. This one that died in this group succumbed to pneumococcic meningitis in Grady Hospital four months after treatment was given and was apparently free of her disease at the time of death.

Of the class 2, out of the six traced, we have four living. Of the other two, one died five years after treatment elsewhere.

In the class 3 where nothing can be hoped for by surgery, we have had a few do remarkably well. Of the 43 traced cases 28 are still living. Two of these cases have gone over three years and still have no evidence of disease. Nine of the living cases however, seem to have disease still present, and will perhaps, sooner or later succumb.

In class 4 we have no cases free of disease, but many that have been palliated. In this class of cases where nothing yet discovered will produce a cure, radiation has done so much in stopping foul discharge, pain and bleeding also producing some prolongation of life, that if it were good for nothing more, radiation would still be a worthy addition to our storehouse of therapy in carcinoma of the cervix.

ANNUAL SESSION
MEDICAL ASSOCIATION
of
GEORGIA
MACON, MAY 7, 8, 9, 10

DISCUSSION ON PAPER OF DR. DENTON

Dr. Charles H. Richardson, Macon: One woman out of every eight develops cancer. Of these one out of every three is in the uterus. Of the uterine cancers nine out of every ten occur in the cervix. With these facts before us I think you will agree that this is one of our biggest problems, and it behooves us as medical men to attack this from the standpoint of etiology. Ninety-seven out of every 100 carcinomas of the cervix occur in women who have borne children, and in the other 3 per cent it can be shown that there are lesions of the cervix which can be classed as precancerous. The matter comes down in some measure to an attack upon the precancerous lesion if we are to make any progress in the treatment. We have told women to come at the first sign of any trouble, at the first symptom. We have given them to understand that the majority of these cases occur at the menopause, but the essayist brought out many cases which occurred in the second and third decade. We must go back and look for the pathology of the precancerous lesion. We must do better obstetrics. We must not allow the cervix to be unduly traumatized during labor. We must have the patient come back at the end of three months and examine the cervix and if an erosion is found it can easily be treated with the cautery. The precursors that have existed for a long time, with the distress, the discomfort, and the backache, all of these are in the realm of the general practitioner for treatment. Those patients can all be treated in the office, without an anesthetic and without pain. A simple cauterization of the cervix at monthly intervals, or three week intervals, done in the office with a small cautery, will almost invariably cure these patients of the chronic endocervicitis.

Dr. C. R. Battey, Augusta: Following a recent service at the New York Cancer Memorial Hospital, under the direction of Drs. William P. Healy, surgeon, and James Ewing, pathologist, I was greatly impressed with the results they obtained from the combined use of radium and x-ray therapy in the treatment of these cervical cancers. It was found that the more malignant the lesion the greater was the response to irradiation. At the Memorial Hospital the routine at present in cancer of the cervix is to first determine the type of cell as regards prognosis.

Type I represents the adult cell type, or the slow-growing, that gives the least response to radium and x-ray.

Type II is the semi-adult type, which is more radiosensitive.

Type III represents the immature cell type, which shows rapid metastases, with quick, direct extension, and these growths give a response to radium which is astonishing. The lesions show marked regression within a period of three to six weeks following the administration of, usually, 8,000 millicurie hours of radium in the form of 3,000 millicurie hours by the vaginal bomb, or special radium applicator, for directing the rays against and along the cervix, at the same time protecting the more distant tissues, the filter being 2 mm. of brass, or its equivalent, for screening out all beta rays. Then from 1,000 to 2,000 millicurie hours are administered with gold emanation seeds, which are inserted directly into the lesion by needles placed 1 square centimeter apart, and 3,000 millicurie with cervix tandem; that is, 2 mm. of brass filtered radium inserted into the cervical canal.

A month or six weeks later, according to the regression and subsidence of radium reaction, a pelvic cycle is given, the dose and set-up varying according to conditions; for example, four exposures, 320 milliampere minutes, 9-inch spark gap, 50 cms. focal distance, the filter being 1-2 mm. of copper and 1 mm. of aluminum. At the Memorial Hospital surgery in cervical cancer is considered contraindicated, except in a very few instances, one being extensive complicating pyometria.

The lesions are also classified into early, border-line, advanced, recurrent, and post-operative. The results have been most gratifying in a series of some 800 cases since 1924, which are diagnosed by two or more sections.

Dr. Rupert H. Fike, Atlanta: I wish to say that I am sorry Dr. Denton and Dr. Stewart brought in the matter of dosage of radiation. The dosage depends upon the machine that is being used for the x-ray therapy, and the particular type of filter and distance used for the radium. The statement in millicurie hours of the dosage, unless made with exact distance and with exact filters, is of no benefit. The same thing applies to the x-ray dosage, and particularly to the individual machines. I think radiation is one of the most valuable methods of treatment in the far advanced patients, and I believe the surgeons ought at least to investigate the value of this therapy at present.

(Continued On Page 43)

INSULIN IN MAL-NUTRITION

J. KENNETH FANCHER, M.D.,
Atlanta

Introduction

Fifteen years ago in a Northern city, a very thin patient in otherwise good health questioned her doctor. "Why is it," she inquired, "that all this milk and eggs and forced diet together with resting in bed does not make me gain in weight?" The doctor made a wise reply. "Madam, you simply have a very good sewerage system." During the past three years, numerous reports have come from experiments with Insulin in various non-diabetic conditions. Two and one-half years ago the writer first made his experiments with this treatment and reported six cases, five with favorable and one with no change in weight.

Bibliography

The bulk of the literature on this subject is from German writers. There are some contributions from Spanish and French sources and lately (past three years) from American workers.

Falta (1) was the first to show that Insulin would cause an increase in weight in cases of malnutrition. Even before the advent of Insulin he advanced the theory of pancreatogenic obesity. He assumed a hyperfunction of the Islands of Langerhans to exist: just as there is a hypofunction of these Islands in Diabetes Mellitus. This condition of hyperfunction of the Islands of Langerhans led to an increased deposition of fat from carbohydrate and thereby to some extent from fat and protein. Falta carried out his study on three patients with good success.

Shortly after the Falta report, two American observers, Fischer and Rogatz (2), showed that certain types of malnutrition in children responded very promptly and satisfactorily to Insulin and glucose. Their technique consisted in injection of Insulin with 20 per cent glucose through the anterior fontanelle, or Insulin with 15 per cent glucose intraperitoneally or subcutaneously. Appropriate feeding formulae were always tried out first.

According to Vogt (3), the female sex organs regulate to a considerable extent the fatty deposits of the body. Many cases of obesity or cachexia are associated with menstrual disorders. Restoration of normal body weight is accompanied by relief of these disorders.

That stimulation of the formation of endogenous Insulin by the administration of carbohydrate before and after each dose of Insulin by hypodermic will result in an increased weight production, is concluded by Depisch (4), who quotes the work of Schelling and Hafschnid to support his proof. He states that the administration of carbohydrate alone will cause an alimentary stimulus for the production of Insulin, which will increase a weight curve formerly stationary for weeks. The increased stimulus upon the Island function causes an increased function. The interesting observations of Weichmann (5), show that Insulin has a slight water-retaining effect in the body without edema, and causes enlargement of the heart. It also influences the activity of the stomach by shortening the evacuation time. According to his tests conducted roentgenologically, 40 to 50 units of Insulin shorten the evacuation time of the stomach 90 minutes. The effect on gastric acidity was not uniform. Weichmann also mentions the fact that Insulin will not produce a gain in weight over the normal weight. There seems to be considerable evidence that adrenalin acts antagonisticly toward Insulin to prevent overweight. The effect of Insulin in undernourished psychotic patients has just recently been shown to be of value by Appil, Farr and Marshall (6), who reported 33 cases with 20 per cent improved. Their maximum dosage of Insulin was 45 units daily for females and 60 units daily for males. In spite of careful checking on the blood sugar, three cases developed incipient coma. The mild symptoms of hypoglycemia were permitted to occur, such as increased appetite and very slight uneasiness. The authors conclude that Insulin is a valuable adjunct in these psychotic cases.

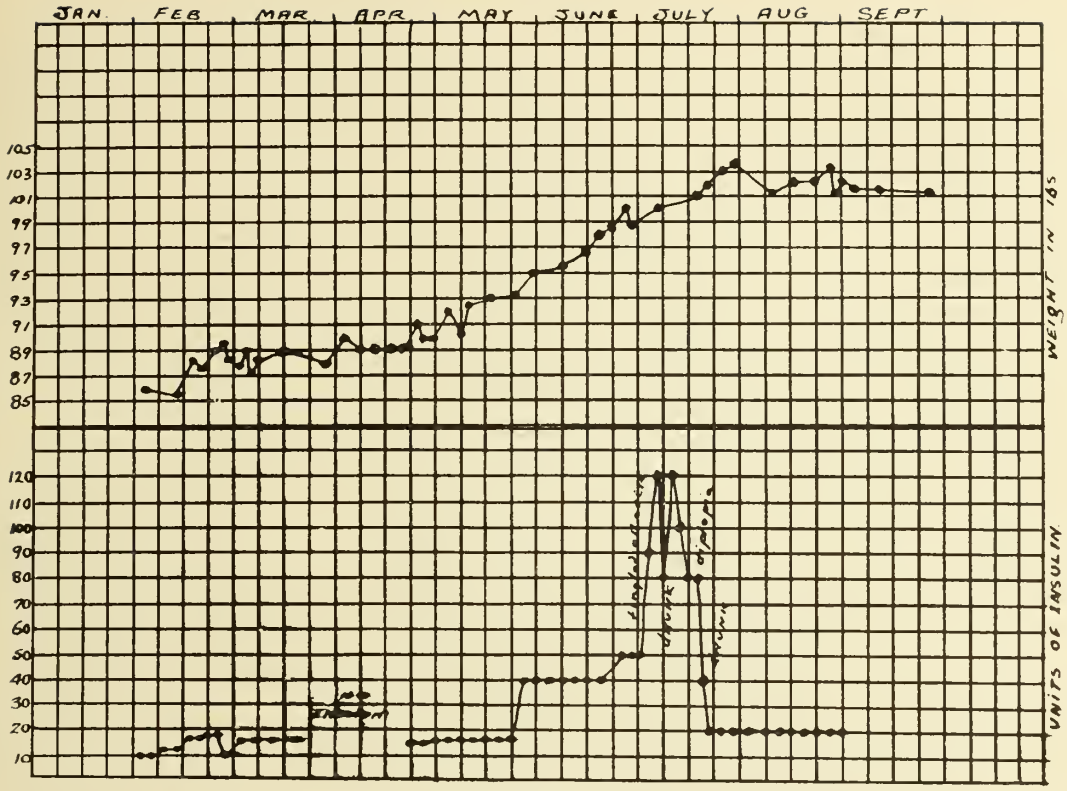


Figure 1.
Case reported. Effect of protracted insulin treatment. Insulin omitted during March, April and September to determine if weight would be retained.

Indications For Use

It is quite generally agreed that Insulin is indicated in all patients whose emaciation is due to a constitutional or nervous condition. The Don Quiote type is characteristic—tall, raw-boned. It should be tried in cases of chronic infection and neoplasms, though only as a palliative procedure. Numerous favorable reports on the Insulin effect include the following: Pernicious vomiting of pregnancy, Basedow's disease (of low toxicity), furunculosis, chronic leg ulcers (Insulin salve), acetonemic vomiting of children, preoperative cases, post-operative cases with long drawn out convalescence, gastroptosis and enteroptosis, menstrual disturbances, dystrophy of the newborn, premature newborn. Also variable reports on peptic ulcer, ozena, septicemia, skin diseases, antidote in cyanide poisoning, hepatic insufficiency.

Contra-Indications

Febrile conditions, organic disease and carcinoma cachexia are contraindications. Vogt advised against Insulin during menses. This seems unimportant as we have been giving regular treatments for months without cessation with no ill effect during the periods, except at very high dosages rarely given.

Technique of Administration

The technique of administration varies with different workers. From one to five doses daily are given. Some advocate bed rest for the first week. The average dose is 30 to 50 units daily in two doses two hours before meals. Maximum dose, 50-150 units daily, the last dose to be about 6:30 p. m. In ambulatory patients coming to the office it is often difficult to give more than one dose daily. We have varied from one to three doses daily. Usually we give one dose. This is given after the patient has eaten a sweet chocolate bar and is followed by the regular meal. In other words the dose always precedes a meal. Sometimes we alternate and have the meal precede the shot and the chocolate follow. This has not caused any ill effect. Our average dose is 20-30 units daily. Lately we have increased the average dose to 40 units daily.

This we consider the optimum dosage. In

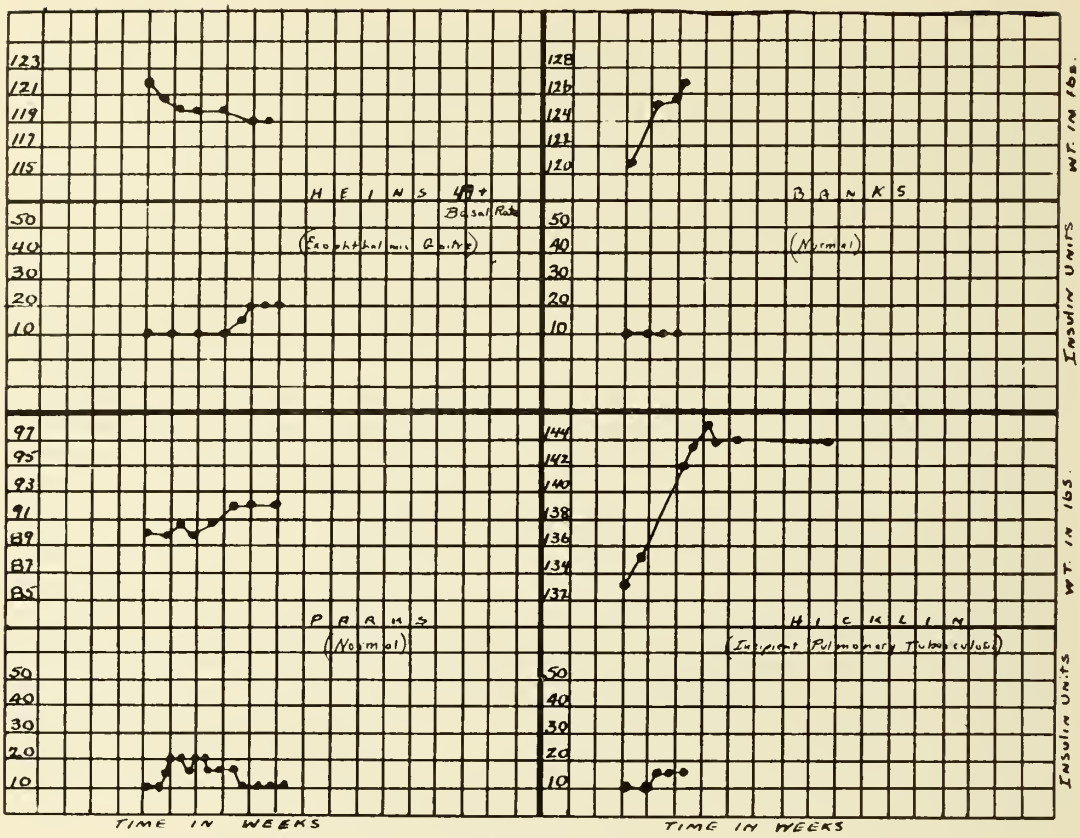


Figure 11

Parks—No effect from insulin. Banks—Rapid increase in weight. Patient had been losing one pound weekly until treatment. Heins-basal rate of 49 plus on three examinations. Rate of loss of weight diminshed slightly under insulin. Patient has been operated on. Hicklin—Insulin caused satisfactory weight increase, retained for More than one year.

children the administration is through the anterior fontanelle or intraperitoneally or subcutaneously. In adults always subcutaneously. Administration by mouth of Insulin and various substances with intent to gain weight has been ineffectual in our hands. No special diet is needed.

Untoward Effects

The untoward effects of hypoglycemia are: First—acute hunger, vague discomfort, weakness, trembling, sweating, palpitation; then—hot and cold sensations, pallor and blushing, vomiting, prostration. These of course may be recognized early and prevented by prompt administration of carbohydrate in the form of orange juice, sweet chocolate or cane sugar in water.

Case Report

B. M. H. Female. Age 25. January 18, 1928. Complaint: Underweight for 15 years. Mother had uterine carcinoma operated successfully. One uncle has tuberculosis. Patient has had measles, mumps, pertussis and varicella. All mild, no complications. Tonsils removed four years ago. Mastoid operation two years ago. Occasional headache. Easily fatigued. Always affected by weather. Very nervous. Had severe attack of diarrhea two years ago in summer; as a child had diarrhea every spring. She has occasional twitching of lips. Legs feel heavy occasionally on lying down. She has a chronic weeping eczematous eruption on wrist. Her greatest weight was 98 pounds seven years ago. Her average weight is 86.

Dietary habits are good with exception of three cups of coffee daily and not even one glass of water daily. Poor appetite. Sleeps well. Slightly constipated. Menses normal, beginning at 14 years. She worries considerably. Does not get despondent. Patient weighed nine pounds at birth. Mother states that doctor said patient was "the longest baby he had ever seen." This however is not reliable. Patient was breast fed. She was a full term baby. Her first tooth appeared at six months and she started to walk at nine months. She knows she has been very thin for 15 years; ever since age 10 years. Patient never had a good appetite and eats small meals. She "gets empty but doesn't want anything to eat." All food except onions agrees with her. Patient has been taking tonics for years; also taken Cod

Liver Oil and forced feeding with 1 1-2 quarts of milk daily without any gain in weight. Sweets make eczema break out. Pork has been omitted from diet.

Examination: A slender female slightly above average height: decidedly underweight. Height 5 feet 6 1-4 inches. Weight, 84 1-2 pounds. Ideal weight, 140 pounds. Temperature 98 2-5 degrees. Pulse, 84. Respiration 16. Head: hair dry. Skin cool and dry. Sclera bluish white faintly injected. Conjunctiva anemic. Tongue pale, slightly flabby. Palate high and somewhat narrow. Neck: bony landmarks exceedingly prominent. Thyroid small. Chest: flat in type. Breasts poorly developed; no mammary tissue palpable. Expansion slight. Lungs clear. Heart: slight presystolic thrill and shock palpable over precordium. Aortic dullness equals 3 cm., right cardiac dullness 1cm., left cardiac dullness 6 cm. There is a mitral systolic blow transmitted to left axilla and pulmonic area. Second sounds slightly accentuated. B. P. left arm 112-70 P. P. 42, right arm 105-80 P. P. 25. Abdomen: scaphoid type. Costal angle very acute. Scanty panniculus. Slight tenderness over both kidneys on bimanual examination. Abdominal reflexes exaggerated on right. Definite tenderness over McBurney's point and over both iliac regions more pronounced on right. Extremities: emaciated. Hands long and thin; fingers long and tapering. Palms cool and moist. Dermatographia easily produced. Fluoroscopic Exam: lungs clear. Long narrow type chest. Heart: narrow and vertical tyep. Narrow aortic arch. Stomach: ptosed and movable. No deformity. Intestine: ptosed. No cecal stasis. Basal Metabolic Rate minus 15. Urinalysis: faint trace of sugar in both morning and evening specimens. Trace of Indican also. Microscopic examination—moderate number of pus, some clumped; epithelia; calcium phosphate crystals; few mucous shreds. Blood: Hb 85 per cent. Clotting time one minute. RBC 4,-300,000. Color Index .98. WBC, 4,850. Polys 65 per cent. Small 17 per cent. Large 16 per cent. Trans., 2 per cent. No malarial parasites found. Ewald Test Meal for gastric contents: excessive amount of thick tenacious mucous. Unable to obtain meal with Rehfuss or stomach tube. Thyroid gland 1-2 grain daily; water, six glasses daily; Insulin daily was begun at once. The thyroid was omitted after one week on account of rapid pulse. Patient gained weight slowly on taking Insulin three times a week, 10 units each time. The chart shows the relative effect of Insulin and weight increase. There were several ill-effects noted, but these were only on very high dosage and during menstruation. For instance, patient became "drunk" one evening while out with a young man and behaved very passionately, which was unusual for her. She did not remember this the next day, but the young man did and called up for another date. While on dosage of 120 units daily patient became foolish at night and would say "crazy things." A dose of sugar in water relieved instantly. We believe that had the patient not become careless from long dosage of the medicine and omitted the usual precaution of eating sweets after the treatment she would not have had the ill-effect. On one of these occasions she ate the sweets but omitted the meal. The other charts which we will show include cases of tuberculosis and exophthalmic goitre. These are not generally permanently cured by Insulin and in these cases were not, though the case of tuberculosis retained his weight for one year and is considered arrested at this time.

Summary

(1) Hypodermic injections of Insulin produced a gain in weight in certain cases of malnutrition in non-diabetics.

(2) The increased weight was retained.

(3) High dosages produced moderate ill-effects, with lack of corresponding increase in weight, but this was immediately controlled by feeding carbohydrate.

(4) Increased appetite, better mental attitude and general increased metabolism are produced by Insulin.

(5) Bed rest was not employed in any of the cases; all were constantly at work; frequent blood sugar determination not necessary.

(6) Sufficient carbohydrate to equal three grams per unit of Insulin was administered before and after each shot of Insulin.

(7) No case became obese or above normal weight.

(8) Some cases did not respond to Insulin therapy and carbohydrate feeding.

(9) Moderate hypoglycemia and nervous reactions occurred when giving Insulin during menses.

(10) Insulin may be safely given over a long period of time to non-diabetics.

REFERENCES:

(1) Quoted by Vogt, E.—Weit-Mitchell Treatment (Forced Alimentation) with Insulin-Munchener Medizinische Wochenschrift 73:7-9 (Jan. 1) 1926.
Abstracted in International Medical Digest April, 1926, (Page 209.)

(Continued on Page XV)

BLOOD CREATININ

Case Report

MAURICE LEE BEN CLARKE, *B.S., M.D.*,
Atlanta

Creatinin, being a product of endogenous metabolism, is excreted in the normal urine up to 1 and 2 grams daily, dependent upon the protoplasmic mass of the individual and is not influenced by diet, exclusive of creatinin itself (Nelson).

In the case to follow, the reading of this constituent reached such a point as to make the case interesting to report if not instructive as to the limits that this substance is capable of assuming.

Case Report

On the neurological service of Grady Hospital there was admitted on June 21, 1925, a white male, age 19, with a chief complaint of "paralysis." The admission notes read as follows:

"Unable to obtain any history from patient, as he is not able to talk. Examination shows: Ptosis of the right side of the face, especially involving the lower set of the facial nerve terminals. There is a right hemiplegia of the tongue, which is dry and swollen. The pupils are equal and react but slightly to light: they are normal in size. The neck is swollen, probably due to pharyngeal edema. The patient is unable to open his mouth or to protrude his tongue. He understands what is said to him and is cooperative. There is a complete right hemiplegia. The reflexes in the upper extremities are present and seemingly not exaggerated. Those in the lower extremity are absent, including the plantar. There is an incontinence of urine and feces. The heart and lungs are essentially negative, except for a diffuse apex beat. The pulses are equal, full and bounding. The patient is lethargic. Blood pressure, 165-85. There is marked plus four arterio-sclerosis.

"Impressions:

1. Cerebral thrombosis.
2. Luetic vascular spasm, with epileptiform attacks.
3. Chronic parenchymatous nephritis."

A lumbar puncture was made, and 20 cc. of clear fluid withdrawn, not under pressure, the analysis of which showed a negative Wassermann reaction, a cell count of two, a trace of globulin, and a negative colloidal gold curve. The second original impression, that of possible luetic spasm, was then tentatively eliminated.

The temperature on admission was normal, with a pulse of 84, and a respiratory rate of 26. The temperature fluctuated between 97 and 100 for the most part, with no typical curve, the pulse being between 74 and 100, pretty much in line with the temperature.

Summary of History

Informant: Mother. Family history negative.

P. H. Negative, except for attack of hematuria at 15 and nocturia. P. I. Onset gradual. First positive symptoms occurred seven days prior to admission when he had a convulsion, preceded by twitching of face and turning of head to the right. He had three of these convulsions within 24 hours and another on the next day. Three days later there had development impairment in speech, in performing voluntary movements with the right hand and then a right hemiplegia with bladder and rectal incontinence. It was not previously stated that the onset of the hemiplegia was gradual and progressive, first involving the right side of the face, then the right arm and finally the right leg.

Physical Examination

General appearance: Pale, under-nourished male of 19. Lethargic condition. Mouth: fetor oris. Ptosis of right side of face. Tongue coated, swollen and dry. Unable to protrude tongue because of edema.

Teeth diseased. Gums diseased.

Arteries: markedly sclerosed, blood pressure 165-85.

Sphineters: incontinent.

Extremities: paralysis of right arm and leg.

Reflexes: present in upper extremities, absent in lower right extremity.

Clinical Course

On the third day in the hospital patient had another convulsion of about seven minutes duration. The temperature remained normal but the pulse and respiration were somewhat increased.

By the seventh day he was able to talk very intelligently, the lingual edema having subsided and he was able to move his arm and leg, almost at will in most directions. The tongue still had a slight deviation to the right and a furry coat. There was no ptosis evident in the face at this time (June 28). The blood pressure was then 150-80 and it continued to fall until it reached 128-70 on July 7.

The patient steadily improved up to a certain point. By improvement, I mean his hemiplegia cleared up, he was mentally clear

and well oriented, his appetite was better—in other words, he felt better. Of course he was declining the whole time he was paradoxically "improving." At about the close of the last week he developed symptoms of acute uremia (latent type) without convulsions or loss of consciousness, became worse daily and finally died in coma of short duration on July 12, 1925, three weeks after admission.

Laboratory work in chronological order:

Blood Wassermann, negative. As already stated, spinal fluid negative. Urinalysis: June 22. Spc. Gr., 1010. Acid reaction. Albumen, plus two.

Sugar negative. Microscopic: moderate number pus cells. Few RBC. Few epithelial cells.

Blood chemistry expressed in mgm. per 100 cc:

Date	Urea Nitrogen	Creatinin	Non-protein Nitrogen
June 23	150	10	
June 24	150	10	
June 25	210	14.5	320
June 27		20	
		30	
July 2		36	
By Folin-Wu method			
		38	
July 3		24	
			Chlorides
		27	450

Urinalysis: June 25: Alb., plus 4. Indican, plus 1. Many pus cells; amorphous material; occasional granular cast. Total acidity 30 degrees. Blood count, June 26: RBC, 2,980,000; WBC, 14,800; Polys, 85 per cent; SL, 12 per cent; LL, 2 per cent; T., 1 per cent. Blood sugar, June 26: 181.5 mgm. June 29: 166.6 mgm. July 2: 250.0 mgm.

Renal function (intramuscular): June 28: 0 per cent for two hours. June 29: 0 per cent for two hours.

Renal function (intravenous): July 2: no appearance time at end of one hour. X-ray of head: July 7: Sella turcica normal. No absorption of clinoids.

Lateral view of head shows no evidence of sinus involvement. X-ray of G-U tract, July 7: Kidneys and ureters negative for stones. Kidneys normal in size and position. Catheter in right ureter to sacro-iliac joint.

Blood count: July 7, RBC, 2,400,000; WBC, 10,400; Polys., 87 per cent; SL, 11 per cent; LL, 2 per cent; Hemoglobin, 40 per cent.

Urological examination of the patient, July 8: Both kidneys of normal position. Left kidney larger than right; no tenderness. There is an atrophy of both testicles and a slight chronic epididymitis on the right side. Urine shows a few pus cells, a few RBC, and casts. The patient was cystoscoped and the bladder found normal. A catheter was passed up the right ureter without obstruction. Unable to do a pyelogram because of the pain. He has quite a retention of waste products and the kidneys do not eliminate any dye. Evidently there is but very little secreting substance remaining. On account of the low erythrocytes, lack of elimination, toxicity and presumably infection elsewhere, advised blood transfusions, repeated, in small amounts.

Coagulation time (July 9): 3 minutes, 45 seconds. At this time, transfusion was considered, but no donor could be found. The patient was found to be Group 3 and agglutinated the blood elements of 25 people.

Blood creatinin, July 11: 27 mgm. per 100 cc.

Stool examination, July 11: Negative for parasites or ova.

Autopsy

The only permission obtainable was for the kidneys alone, which upon gross examination appeared to be cystic and fibrosed. Their size was about normal. The capsule was given up sluggishly leaving a somewhat lobulated surface. The kidneys contained abscesses which opened on the surface beneath the capsule. On microscopic examination they showed marked cellular infiltration throughout as well as marked destruction of tissue. The epithelium of the tubules was destroyed together with the tubules themselves. The glomeruli and Bowman's capsules showed partial destruction.

Pathological diagnosis: Acute nephritis.

Conclusions

Evidently the condition was one of acute nephritis, both toxic and infectious types, which gave results which would ordinarily be considered not unusual were it not for the fact that the patient lived for 22 days in such a condition and was mentally clear through most of the time.

The fact that the hemiplegia cleared up can possibly be explained as having its origin in a localized edema of the brain or in the canaliculization of a cerebral thrombus.

The point of most interest, however, is from the laboratory standpoint, the rapid rise of blood creatinin to the uppermost point of 38 mgm. per 100 cc. with its concurrent clinical manifestations.

ABDOMINAL PAIN*

Importance of Urological Investigation

SAMUEL J. SINKOE, M.D.,
Atlanta

In reviewing the symptomatology of patients that are admitted to our Urological Clinics, one is immediately impressed with the constant complaint of abdominal pain. The pain may be sharp or colicky in character or of a dull nature not particularly localized nor referable to any definite organ. Associated factors, e.g., hematuria, frequency of urination, pyuria, etc., may of course be present but quite often they are lacking, and naturally, the examining physician, unless he is on the alert, is apt to interpret his findings incorrectly. Within the last few years much progress has been made in urology with the result that the general practitioner now realizes the importance of a thorough cystoscopic and x-ray examination, particularly in those patients with abdominal complaints. Through modern methods of diagnosis, the urologist has been able to state definitely whether any part of the G. U. tract is involved and responsible for the patient's symptoms. A careful examination of the appearance of the bladder mucosa, and ureteral orifices, the patency of the ureters, the appearance and microscopic findings of the ureteral specimens, the results of the kidney-function tests, the x-ray and pyelographic interpretations, etc., are valuable aids in our diagnostic armamentarium.

What are some of the supposed abdominal conditions which elicit pain that are in reality due to diseases of the genito-urinary tract but wrongly interpreted as diseases of other organs? One must remember also that it is possible to have simultaneous involvement of the G. U. tract together with other abdominal organs. The following diseases are often encountered and it is essential to make a thorough examination of the G. U. tract for a proper diagnosis.

1. Acute and chronic appendicitis.
2. Gastric and duodenal ulcer.
3. Cholecystitis, gall-stones, etc.
4. Post-operative adhesions.
5. Diseases of the liver.
6. Diseases of the spleen, sigmoid and descending colon.
7. Abdominal tumors.
8. Inflamed retro-peritoneal and mesenteric glands.

In reviewing our anatomy, we can readily see why a confusion of symptoms arise, when we are only dealing with a portion of the genito-urinary tract. The right kidney is in close proximity to the liver, ascending colon, duodenum, inferior vena cava, diaphraghm, pleura, etc. The left kidney is closely related to the stomach, pancreas, supra-renal gland, meso-colon, spleen, diaphraghm, pleura. The ureter which is approximately 15 inches long and is closely related to many important structures, is also subject to many pathological conditions. The nerves which originate from the sympathetic nervous system are derived from the renal, inferior mesenteric, spermatic, ovarian and hypogastric plexus. Renner has recently shown that there is a reciprocal relation between the innervation of the renal system and the gastro-intestinal tract. Connection between the splanchnic nerves and renal plexus is very distinct on the left side, and in addition, the renal and spermatic plexuses are directly connected. The renal and celiac ganglia are also closely related.

First, let me describe the relationship that exists between stricture of the ureter and acute and chronic appendicitis. The chief symptoms of ureteral stricture are abdominal pain, and distress, more localized in the right lower quadrant, nausea, restlessness, pallor, loss of appetite and weight, back-ache, etc. Among the urinary disturbances present but often overlooked, are frequency of urination, nocturia, dysuria and hematuria. Microscopically, the urine may show pus cells, either alone or combined with red blood cells. The onset may be sudden or gradual. The diagnosis is confirmed by ureteral catheter, or pyelographic examination. We have often demonstrated in our clinic, the importance of catheterizing and noting the

*Read before the Fulton County Medical Society, Atlanta, Georgia, July 19, 1928.

patency of the ureters in supposed cases of appendicitis, since dilating the ureter and relieving the obstruction will cause a cessation of the abdominal pain and other associated subjective symptoms. Post-operative appendiceal patients that still complain of abdominal pain should be referred to the urologist. A diagnosis of post-operative adhesions should be supplemented by a urological examination.

There are many patients who consult the gastro-enterologist because of vague abdominal pain and distress, and who are very slow to respond to treatment. A careful urological examination is very important in these cases to determine the presence of calculi. At times, these calculi may be overlooked due to a barium filled duodenum or some other portion of the gastro-intestinal tract. Therefore, a plain flat plate is essential in all cases. We must remember that there is a close relationship between the renal, spermatic and ovarian plexuses on the one hand, and the gastric and splanchnic plexuses on the other. In this connection, I would like to refer to those gastro-intestinal symptoms which are directly due to movable or ptosed kidneys. A floating kidney, especially if it descends with its fascia capsule, has a tendency to drag down the duodenum, sometimes for a considerable distance. That there is a close relationship that exists between the two organs, can be demonstrated in cases of general enteroptosis, where the descending stomach and duodenum carry along the right kidney. Because of the close proximity of the duodenum and colon, perinephritic abscesses are apt to occur if the perinephritic fat is scant or absent and if the kidney is adherent to the intestine. However, as a rule the abscess usually drains in the path of least resistance, i.e., between the leaves of the renal fascia, either in an upward or downward direction. Owing to the close relationship between the kidney and pancreas on the left side, it often happens that in cases of floating kidney, that the pancreas follows the kidney. Bartells was the first to describe the occurrence of dilated stomach with movable right kidney—noting in 40 cases of dilated stomach, a movable right kidney in 22 cases.

What symptoms do we encounter in cases of movable kidney that are so often wrongly interpreted? The patient may complain of local pain in the loin and marked stomach, intestinal and nervous symptoms. The symptoms may simulate diseases of the gallbladder and liver. The pain, as a rule, is in the median line and radiates to the shoulder blade. Jaundice may be present. In cases of movable right kidney, the patient's only symptom may be gastric pain and distress, however a careful history will disclose renal symptoms also. It must be remembered that many cases of movable kidney will cause no symptoms at all, and in some instances where the kidney is slightly movable, the symptoms are quite intense. The pain in these cases may be dull and continuous or severe and of sudden onset. Probable causes are pressure on the solar plexus, dragging on the peritoneum, a kinked ureter, etc. In most cases, the pain is located posteriorly in the loin and region in front of the kidney. Occasionally, the pain is low down near McBurney's point, or it may follow the course of the ureter or across the abdomen. In some cases, it may be so severe as to cause violent nausea, vomiting and profuse sweats. Symptoms referrable to the appendix may be present, and are supposed to be due to a congestion of the appendiceal veins, following pressure of the kidney on the mesenteric veins.

Abdominal pain is a very common symptom in gynecological patients and it has been estimated that at least 15 per cent have some lesion in the genito-urinary tract, pyelitis being the condition most often present. Stricture of the ureter and calculus are of less frequent occurrence.

So far, I have briefly described some of the abdominal conditions which are so often incorrectly diagnosed, and which are in reality due to diseases of the genito-urinary tract. In order to have a clearer understanding of the abdominal pain due to uro-genital diseases, I would like to mention those conditions most often encountered and briefly

describe its symptomatology. They are as follows:

1. Renal and ureteral calculus,
2. Floating or ptosed kidney,
3. Pyelitis, pyelo-nephritis and pyonephrosis,
4. Hydronephrosis,
5. Stricture of the ureter,
6. Perinephritic inflammation or abscess,
7. Renal tuberculosis,
8. Renal and ureteral neoplasms,
9. Kidney trauma,
10. Bladder involvement.

Symptomatology, calculi; the most important and constant symptom is pain. It may be aching or colicky in character and is most often felt in the kidney region. It may radiate down into the groin and genitals. Pain in some cases may be very severe in the lower abdominal quadrant and may radiate to the umbilicus. In typical cases, the attack comes on suddenly, with severe pain in the kidney region and then quickly radiates toward the groin, scrotum if the patient is a male, and anterior surface of thigh. It may follow the course of the ureter. The duration of an attack is as a rule from four to twelve hours, but may vary from a few minutes to several days. The second cardinal symptom is hematuria. Infection may occur and as already mentioned may spread outside the kidney to form abscesses which may burrow in all directions, thereby simulating other abdominal conditions.

Acute Renal Infections: in these conditions, the pain is usually of sudden onset and localized in the kidney region. However, it may be generalized over the abdomen. Other symptoms, e. g., pyuria, polyuria, frequency and burning on urination, tenesmus and tumor may be associated. Renal colic generally denotes the passage of pus and blood clots through the ureter. Fever is constant in severe cases and frequent in mild cases. A patient with a pus kidney may complain only of dyspepsia and occasional chill which he will attribute to attacks of malaria. In severe cases, weakness, anemia, and jaundice may supervene. The condition may be complicated by furunculosis. Pyuria is constant, although at times the amount of pus will be slight. I have noticed in several instances, with no apparent ureteral obstruction, that the symptoms would subside after passing a ureteral catheter, and instilling into the kidney pelvis, a few c. c. of 5 per cent argyrol. These cases are undoubtedly due to distant foci of infection.

Hydronephrosis. The chief symptoms of this affection are pain and tumor. If the hydronephrosis is due to a calculus, hematuria may be present, and if infection supervenes, pyuria will exist. Symptoms of minor importance are frequency of urination, transient polyuria, nausea and vomiting. Pain is a most characteristic symptom and is usually colicky and recurrent in type. The pain is usually in the loin and may radiate down the ureter. The cessation of the pain may be followed by the passage of large quantities of urine, with a corresponding decrease in the size of the tumor. In some cases, it is dull and constant and confined to the lumbar region or it may radiate to the umbilical region. The presence of the mass when large may cause pressure symptoms, various gastro-intestinal disturbances, and even intestinal obstruction. Samuels and Kern of Baltimore, in a recent article, state that from an examination of 300 patients in the gynecological department, that hydronephrosis was found to be one of the most common of kidney diseases. They report that hydronephrosis is very common among the female patients whose chief complaint is abdominal pain and vomiting. The vomiting was without warning and gave relief for a while. The abdominal pain was dull and nagging and not confined to any particular point. Many of these patients showed scars of previous operations, among which were operations on gall-bladder-appendix, uterus and adnexa. They emphasize the fact that persistent and obscure gastro-intestinal symptoms—without any definite gastro-enterological pathology—demand a correct urological examination. A correct cystoscopic and x-ray diagnosis of a hydro-nephrotic tumor will often solve our diagnostic problems in obscure abdominal conditions. Hydro-nephrosis may be mistaken for enlarge-

ment of the gall-bladder and spleen, tumors of the stomach and pancreas, retro-peritoneal tumors, ovarian tumors, tumors of the intestine, especially colon, tumors of the adrenals, aneurism, etc.

Perinephritic Abscess. When the infection spreads to the perinephritic tissue, there is an increase in the local and general symptoms. The pain in the region of the kidney is quite severe, and may be referred to the upper anterior abdominal region or downward toward the hip joint. Involvement of the psoas may cause flection of the hip and pain on movement. If the abscess breaks through, sinuses may appear in several places and simulate other abdominal conditions.

Tuberculosis. In a series of 342 cases of urogenital tuberculosis, Young found that in 24 cases the first symptom noticed was diffuse renal pain, in 19 there were renal colic, constant pain in bladder region in 10, pain in perineum in 8, pain in rectum in 1, and pain referred to the testicle in 26. Although frequency of urination was the most common symptom noted, other symptoms e. g. hematuria, dysuria, pyuria, etc., were encountered. In cases of diffuse renal pain, the pain may radiate to the shoulder, to the groin or to the umbilicus.

Renal and Ureteral Neoplasms. The chief cardinal symptom is hematuria, but in about one-third of all cases diffuse renal pain occurs, however, the pain bears no special relation to the bleeding. A perceptible tumor is a late manifestation. George Gilbert Smith and A. B. Shoemaker in an analysis of 62 cases of hypernephroma of the kidney, state that pain was a constant factor in 32 cases and that this symptom was of more importance than the hematuria. Occasionally para-renal tumors, i. e., tumors which originate primarily in the fatty or fibrous capsule of the kidney, may invade the peri-renal bed or the retro-peritoneal space. These tumors which are composed of connective tissue, may attain considerable size and are often confused with tumors of the pancreas, omentum, or with a cyst or tumor of the ovary.

Bladder Tumors. Pain is an inconstant symptom in the early cases, but constant in more advanced conditions. Hematuria is the most frequent complaint and commonly associated with frequency and burning on urination.

Trauma. In rupture of the kidney, due to trauma, as a result of a blow and known as a sub-parietal rupture, the two cardinal symptoms are pain and hematuria. Although injuries to the kidneys are not common, complications very often occur. Injury to the ureter may cause extravasation, and if torn completely across, no blood or urine can reach the bladder. The pedicle of the kidney may be torn completely across and cause severe hemorrhage. The peritoneum may be torn, allowing blood or blood and urine to enter the abdominal cavity. Local pain in the kidney region which may be referred to the abdomen, may be very severe and accompanied by muscle spasm. Ureteral colic and vesical spasm due to passage of blood clots may occur. Peritonitis may complicate the condition and cause symptoms, e. g., hiccough, vomiting, abdominal pain and distention. In rupture of the bladder, the two chief complications are urinary extravasation and infection. In observing the symptomatology of these patients, we note that pain is constant from the beginning. If the rupture is intra-peritoneal, it will have the character of peritoneal pain and there will be vomiting and distention. If the rupture is extra-peritoneal, the pain will be localized in the lower abdomen and may radiate to the perineum and legs. Tenesmus and bloody urine are generally present.

Vesical pain may be felt in the lower abdominal region or may be referred to the urethra. It may be constant or appear during voiding. A superficial cystitis may be painless, but if the deeper coat is involved, there may be unbearable pain. This occurs in acute cystitis, submucous, cystitis and tubercular cystitis. Pain may or may not be present in calculus, trigonitis, chronic cystitis and foreign bodies. Tumor in the early stage is painless, but when the bladder wall becomes infiltrated, pain may be very severe. Complete retention due to obstruction will cause pain.

(Continued On Page 43)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

JANUARY, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

DUTY CALLS

When our country calls us for physical defense we respond as one man with both our lives and our worldly goods. There is a defense that every country at all times needs and there is an ever lurking enemy in our midst that is even more dangerous than physical violence. That enemy is ignorance. Just as is so in real war so it is in our warfare against the stealthy enemy ignorance, which is always stalking in our midst. Manpower is at all times bountifully available and the real problem is finances.

Men of learning are ready uniformly to lay their lives upon the altar of science to train youths for their respective callings, and their handicap has been through all the ages a lack of money to carry out their purpose. There has never been a time when this situation has had so much the appearance of a tragedy as exists with us today in reference to medical education. The science of medicine has become so deep and so broad; so intricate and so complex, that in order to prepare a youth for life work in this field, there must be a physical plant outlined upon such a broad and extensive plan that we are appalled at the great lack of funds for its proper installation.

The Medical Department of the University of Georgia is our own plant and the time has come that it must have aid other than state appropriations. The city of Augusta is responding nobly to this cause. It is giving $90,000.00 a year for hospital facilities and $50,000.00 for school maintenance. This fund is far from enough to give the institution facilities to care for young men who are knocking at its door. Furthermore the public is beginning to suffer on account of a lack of properly fitted doctors, and we must fit them properly or our people will become more and more afflicted from the practices of charlatanry that are springing up all around us.

Dr. Kelly, secretary and treasurer of the Alumni Association of the Medical Department of the University of Georgia makes this statement: "We turned away about 25 applicants from the state of Georgia and 25 additional non-residents last September. Our clinic is housed in poor quarters that can hardly be kept sanitary. The rooms are small and occupy a basement"—two outstanding statements, one the capacity of our school must be increased, the other our quarters must be improved.

The Medical Department of the University has outlined a movement to raise a Centennial Memorial Fund of $300,000.00. This fund will be used to construct a Clinic Building which will also be used to increase the laboratory facilities. The institution is now suffering greatest in facilities for caring for the first and second year students. It is the duty of the Medical Profession of Georgia to go forward in the aid of this movement as strongly as is within its power.

All great educational movements must be fostered by donations from a country's citizenry and there is no education in which a doctor is so much interested as that of medicine. People who make up the social fabric of a commonwealth should not feel that

it is the duty of solely the rich to finance educational institutions. Everyone ought to do his bit. There is not a single one of us but that can help some and when the opportunity presents itself, it is hoped that every member of the profession in Georgia will support this movement.

Nothing makes one so happy as to feel that one is a part of the united force that is raising the standard of life and placing human beings upon a higher plane. Each of us should consider it a privilege to aid in the construction of this Memorial Building.

E C. THRASH, M.D.

CAPITAL INVESTMENT IN MEDICINE

As you receive this letter, the questionnaires on the Capital Investment in Medicine will be ready to leave the headquarters of the American Medical Association. A very important group, composed of economists, publicists, physicians and others, has undertaken to make an investigation of the cost of medical care, the results of which will be of great importance to the medical profession. The American Medical Association has undertaken to collect information pertaining to the capital investment in medicine and the income from medical practice.

As a part of the work of the above-mentioned group, known as the Committee on the Cost of Medical Care, the American Medical Association is to request more than 25,000 physicians, selected at random, to furnish certain data pertaining to the invested capital involved in physicians' education, interne training, post-graduate courses, office and traveling equipment, office maintenance, medical society affiliations, library maintenance and medical licensure fees.

This, as you will realize, is a survey of the profession, by the profession, and for the benefit of the profession. The questionnaire is to be anonymous and, therefore, there need be no fear of any embarrassing or undesirable results from the information returned.

You are urged to encourage, among the members of your state society, a serious and thoughtful consideration of this matter to the end that complete and reliable data will be given on the several items. We desire that you suggest, through your medical journal, by news item, editorial and other appropriate means, the importance of this survey and the desirability of universal participation on the part of the physicians who receive the questionnaire.

R. G. LELAND, M.D., *Director of Study, American Medical Association, Chicago, Ill., January* 5, 1929.

THE ANNUAL CONFERENCE OF SECRETARIES IN NOVEMBER

The problems of the profession, personal and organizational, were pretty well threshed out at the annual conference held at the A. M. A. headquarters in Chicago, November 16 and 17th last.

Dr. M. L. Harris, Chicago, President-elect of the American Medical Association, spoke of the cost of medical care and the study of the problem now in progress. Adequate scientific service to people at a price they can pay is the great problem. Dr. Harris thinks there is need within the medical society for an organization for business purposes. A health institute in Chicago has made a hundred thousand dollars a year profit on the basis of patients paying what they can, according to circumstances. If organizations of this kind can do these things why cannot the organized profession do as well?

State medical organizations came in for thorough discussion. Dr. H. H. Shoulders, secretary of the Tennessee State Medical Association, said efficiency must come from organization. Officers must put heart and soul into the work. If the heads of the organization are efficient the society will function efficiently. Practical programs—not too much "high brow material in program"—said Secretary West, of the A. M. A. The program came in for much discussion and it was said that papers by local men are of some value as giving the local men a chance for development and to maintain interest in the society, but that medical men of authority are best on the program. Much depends on the program committee.

Dr. A. H. Bunce, of Atlanta, outlined the

policy of the Georgia society and the same is here given because the society is similar in numerical strength to the Nebraska society. The policy in Georgia is to have two invited guests and one section. Lobby visiting and too many social features are frowned upon.

The publicity work done by the Illinois society is of interest. The society maintains an educational bureau. Censored radio talks have been broadcasted regularly for the past 18 months. Press articles, censored, go to over 100 papers regularly.

As evidence that large number of members are not necessary to make a county society function successfully, an instance was cited of a county society of eight members having regular meetings and being regularly attended by 125 physicians from the surrounding territory.

Secretary Adams featured the Nebraska State Medical Association's Health Exhibit at the State Fair and was listened to with great interest, the work being new to other states. Secretary Adams is one of the foremost men in the conferences and his work is not as fully appreciated at home as it deserves to be.

The lack of contacts with county and district societies by higher ups was regretted by Secretary Donahue, of New York. These contacts should be cultivated.—Neb. S. Med. Jnl., January, 1929.

IMPORTANCE OF UNDULANT FEVER BEING MORE WIDELY RECOGNIZED*

Undulant fever, a disease contracted from cattle and hogs which are infected with contagious abortion, is being more widely recognized as a problem of considerable importance from a public health standpoint. A number of cases of this disease have been reported from various states.

The disease of contagious abortion is quite prevalent among cattle and hogs throughout the country. Persons who drink raw milk from infected cattle or who handle hogs or cattle that are infected are likely to contract the disease. The name, "undulant fever," is applied to the disease because the attacks of fever come in waves or undulations. The disease was first recognized on the island of Malta in the Mediterranean, and it was thought for a time that it was spread only through the milk of goats. It is now known, however, that the disease may be contracted from cattle and hogs. The disease is not only disabling but extremely chronic in duration. The patient may be ill for two or three years before any improvement is noted. Important studies made by Miss Alice C. Evans, a bacteriologist of the United States Public Health Service, have shown the relation between this condition in human beings and contagious abortion in cattle. In certain states it has been said that undulant fever is of greater importance from the standpoint of public health than is typhoid fever. Many cases are contracted from infected milk. Fortunately, however, efficient pasteurization readily destroys any of the germs of this disease which may be present in milk. The chief precautions, therefore, are the use of pasteurized milk and care when coming in contact with animals known or suspected to be infected with contagious abortion. In a series of cases of undulant fever recently studied among adults living on a farm there were 39 males and six females; six of the male cases are known to have derived their infection from hogs.—U. S. P. H. S.

*An important aid in the diagnosis of undulant fever is the differential leukocyte count. A relatively high lymphocytosis is always present in uncomplicated cases. In a recent case of an undiagnosed low fever a total lymphocyte count (both large and small lymphocytes combined) of 64% and 68% on separate occasions suggested to us the probability of undulant fever in the absence of all other symptoms. The agglutination test was four plus positive in dilution of 1 to 640. The total leukocyte count is relatively low in uncomplicated cases.—*Editor.*

TREATMENT OF ACUTE EMPYEMA COMPLICATED WITH BRONCHIAL FISTULA

According to Ralph B. Bettman and Nathan N. Crohn, Chicago (Journal A. M. A., Dec. 22, 1928), a bronchial fistula that occurs in actual pleural empyema almost invariably closes after artificial drainage has been established. Allowance can be made for the escape of pus and air from the pleural cavity and yet the consequences resulting from an artificial open pneumothorax can be prevented. The closed method of drainage is just as desirable in cases complicated with bronchial fistula as in the uncomplicated cases of acute empyema.

CARCINOMA OF CERVIX UTERI

(Continued From Page 39)

Dr. Calvin B. Stewart, Atlanta (closing): We appreciate the discussion. Only one question was brought up, regarding the matter of technic. We felt that this was not of great interest to a great many here, and it was left out of this paper. The glass tubes were used because of the fact that in cervical carcinoma sloughing is not so frequent as in carcinoma of the mouth and so on, where there is more motion and more pain. If sloughing does occur in the cervix it does not matter so much. We use the gold tubes as well as the glass, but prefer the glass in our cervical work.

ABDOMINAL PAIN

(Continued From Page 39)

In conclusion, I would like to emphasize the following points:

1. Owing to the anatomical relationship that exists between the Genito-urinary and the other abdominal organs, their innervation and close proximity, confusion of symptoms may arise, which demands a complete and thorough urological examination.

2. Through modern methods of diagnosis, the urologist can state definitely whether any part of the G. U. tract is involved.

3. The pain present in many abdominal conditions is really due to pathology of the genito-urinary organs.

4. Patients with post-operative scars, who continue to complain of vague abdominal pain, demand urological investigation.

5. There are about twenty diseases of the genito-urinary organs causing abdominal pain, and unless the examining physician is on the alert, an incorrect diagnosis will result.

BIBLIOGRAPHY

1. Samuels, Abraham and Kern, Howard: Hydronephrosis with Gastro-Enterological Symptoms. Urolog, and Cutaneous Review, Nov. 1926
2. Kelly-Burnam: Diseases of the Kidneys, Ureters and Bladder.
3. Young's Practice of Urology.
4. Smith, Geo. G. and Shoemaker, A. B., Hypernephroma of the Kidney, Jour. of Urology, Oct. 1925.
5. Lyter, J. C., The Upper Urinary Obstructions. Jour. Ma. Se. Med. As., Feb. 1925.
6. Sinkoe, Samuel J.; Diagnostic Importance of the Pyelogram in Chronic Abdominal Conditions. Jour. of the Med. As. of Ga., Feb. 1926. Value of Pyelography in Urological Diagnosis, Urolog. and Cutaneous Review, Feb. 1925. Urological Methods as Practiced in Europe. The Jour. of the Med. As. of Ga., Nov. 1924.

GEORGIA STATE NURSES' ASSOCIATION

New Year

May this be a year of
Thankful yesterdays,
Happy todays and
Confident tomorrows!
—ANNIE BESS FEEBECK.

Could any New Year's wish be finer? Thankful yesterdays, happy todays and confident tomorrows—365 days of joy and happiness, because of right thinking.

We can always look back to yesterday and be thankful for our many blessings. Today we can be happy if we so will to be, and we can look forward with confidence to tomorrow if our attitude is right today!

'God's Minute' gives us a beautiful prayer which is worth repeating here. The author is Daniel A. Poling, pastor of the Fifth Avenue Collegiate Church, New York City, who may be heard over the radio network every Sunday afternoon. "Father of us all, we thank Thee for life, and that we live now; that our eyes have been opened to the beauties of today. That our hands have been filled with the tasks of the present. Nor do we despise the past, into whose labors we have entered. Its errors warn us, its successes inform us, its sacrifices inspire us; and to its brave souls we are forever debtors. We are thankful for the moral leadership of the world—for the women and men who are the road-breakers of liberty. We are thankful for the friends whose faith in us makes us better than we are: for the tasks we are unworthy of but rejoice in. And for Jesus of Nazareth, Thy Son, and in whose Name are all our prayers and supplications."

This gives us courage and strength for our daily tasks and points the way to our responsibility. To us as individuals is charged the responsibility of making thankful yesterdays, happy todays and confident tomorrows during 1929 and all the succeeding years of our lives. Let us enter into this responsibility with a whole-souled determination to make the splendid resolution of our president ring true!

District and County Societies

DISTRICT OFFICERS

FIRST DISTRICT

President ... Myers, William H., Savannah
1st Vice-Pres. ... Elarbee, Geo. W., Daisy
2nd Vice-Pres. ... Ezell, Howard E., Oliver
Sec'y-Treas. ... Long, Wm. V., Savannah

SECOND DISTRICT

President ... Chason, Thomas, Donalsonville
Vice-Pres. ... Sanchez, S. E., Barwick
Sec'y-Treas. ... Watt, Chas. H., Thomasville

THIRD DISTRICT

President ... Lunsford, G. G., Cordele
Vice-Pres. ... Daves, V. C., Vienna
Sec'y-Treas. ... Greer, Chas. A., Oglethorpe

FOURTH DISTRICT

President ... Clark, W. H., LaGrange
Sec'y-Treas. ... Callaway, Enoch, LaGrange

FIFTH DISTRICT

President ... Fort, A. G., Atlanta
Vice-Pres. ... Camp, R. T., Fairburn
Sec'y-Treas. ... Evans, J. R., Decatur

SIXTH DISTRICT

President ... Miller, G. T., Macon
Vice-Pres. ... Hunt, K. S., Griffin
Sec'y-Treas. ... Thompson, O. R., Macon

SEVENTH DISTRICT

President ... Harbin, R. M., Rome
Vice-Pres. ... Wood, C. V., Cedartown
Sec'y-Treas. ... McCord, M. M., Rome

EIGHTH DISTRICT

President ... Carter, D. M., Madison
Vice-Pres. ... Gholston, W. D., Danielsville
Sec'y-Treas. ... Gerdine, Linton, Athens

NINTH DISTRICT

President ... Coker, Grady N., Canton
Vice-Pres. ... Neal, L. G., Cleveland
Sec'y-Treas. ... Bennett, J. C., Jefferson

TENTH DISTRICT

President ... Cranston, W. J., Augusta
Vice-Pres. ... McGahee, R. C., Warrenton
Sec'y-Treas. ... Phinizy, Irvine, Augusta

ELEVENTH DISTRICT

President ... McMichael, J. R., Quitman
Vice-Pres. ... Fleming, Albert, Folkston
Sec'y-Treas. ... Reavis, W. F., Waycross

TWELFTH DISTRICT

President ... Franklin, R. C., Swainsboro
Vice-Pres. ... Edmondson, J. W., Dublin
Sec'y-Treas. ... Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.

2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richland, November 12, 1928.

3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.

4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.

5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.

6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.

MEETING THOMAS COUNTY MEDICAL SOCIETY

The Thomas County Medical Society met in regular session at the John D. Archbold Memorial Hospital on Tuesday, December 11th. After the call to order by the president, Dr. M. J. Erickson, the minutes were read and adopted and election of officers for 1929 was held. The society unanimously re-elected our present president. She enjoys the distinction of being the only woman physician in the state who is president of a county society. For vice-president, Dr. J. M. King, of Metcalfe, was elected. C. K. Wall was re-elected secretary and treasurer. Dr. Rudolph Bell, of Boston, was elected to the board of censors, succeeding Dr. R. A. Hill.

The next item on the program was the acceptance by transfer from Fulton County Medical Society, of Dr. James Pitman.

The scientific program was featured by a most excellent and comprehensive paper on: "Some Clinical Considerations of the Common Cold," by Dr. Hal M. Davison, of Atlanta. This paper formed the nucleus of a symposium of this subject and other papers were read by Drs. Moore and Hill, of Thomasville. Dr. William Williams, of New York City, was among our visitors for the meeting and he was asked to discuss the papers. This he did very interestingly. The other members present then discussed the papers from various angles making it one of the best meetings the society has ever held.

To make the meeting even better and longer to be remembered, the hospital served the society with a very sumptuous and delightful turkey dinner.

Among the guests present at the meeting were Drs. Brinson, of Monticello; Summerlin, of Pelham; Dr. Luke, of Camilla; Dr. Williams, of New York, and the honor guest, Dr. Davison, of Atlanta.

C. K. WALL, M. D.

Secretary.

COUNTIES REPORTING FOR 1929

Randolph County Medical Society—100%

Randolph County Medical Society announces the following officers for 1929:

President—W. G. Elliott, Cuthbert.
Vice-President—D. L. Smith, Cuthbert.
Secretary-Treasurer—G. Y. Moore, Cuthbert.
Delegate—T. F. Harper, Coleman.

Stewart-Webster Counties Medical Society—100%

Stewart-Webster Counties Medical Society announces the following officers for 1929:

President—R. L. Grier, Lumpkin.
Vice-President—C. E. Pickett, Richland.
Secretary-Treasurer—J. M. Kenyon, Richland.
Delegate—C. E. Pickett, Richland.

Pike County Medical Society—100%

Pike County Medical Society announces the following officers for 1929:

President—J. H. Grubbs, Molena.
Vice-President—D. L. Head, Zebulon.
Secretary-Treasurer—M. M. Head, Zebulon.

Dougherty County Medical Society—100%

Dougherty County Medical Society announces the following officers for 1929:

President—F. K. Neil, Albany.
Vice-President—J. P. Tye, Albany.
Secretary-Treasurer—I. M. Lucas, Albany.
Delegate—W. L. Davis, Albany.

Grady County Medical Society

Grady County Medical Society announces the following officers for 1929:

President—J. E. Harden, Whigham.
Vice-President—W. R. Moore, Cairo.
Secretary-Treasurer—J. V. Rogers, Cairo.

Jenkins County Medical Society

Jenkins County Medical Society announces the following officers for 1929:

President—M. E. Perkins, Millen.
Vice-President—H. G. Lee, Millen.
Secretary-Treasurer—C. Thompson, Millen.
Delegate—Q. A. Mulkey, Millen.

Sumter County Medical Society

Sumter County Medical Society announces the following officers for 1929:

President—J. T. Stukes, Americus.
Vice-President—J. W. Chambliss, Americus.
Secretary-Treasurer—Henry A. Smith, Americus.

Turner County Medical Society—100%

Turner County Medical Society announces the following officers for 1929:

President—R. D. Rawlings, Rebecca.
Vice-President—F. W. Rogers, Ashburn.
Secretary-Treasurer—J. H. Baxter, Ashburn.

BOOKS RECEIVED

Technique of Contraconception, The Principles and Practice of Anti-Conceptional Methods by James F. Cooper, M. D., Medical Director of the Clinical Research Laboratory of the American Birth Control League; formerly Professor of Clinical Surgery, Foochow Union Medical College, Foochow, China; and Clinical Instructor in Obstetrics, Boston University Medical School. Contains 271 pages. Publishers: Day-Nichols, 15 East 40th Street, New York City.

Diseases of the Mouth, by Sterling V. Mead, D. D. S., Professor of Oral Surgery and Diseases of the Mouth, Georgetown Dental School; Professor of Diseases of the Mouth, Georgetown Medical School; Oral Surgeon to Georgetown Hospital; Dental Surgeon to Providence Hospital; Oral Surgeon to Gallinger Municipal Hospital; Consulting Dental Surgeon to Washington Sanitarium and Hospital; Consulting Dental and Oral Surgery to Shady Rest Sanatorium, Washington, D. C. Contains 721 pages with 336 original illustrations and 43 color plates. Third edition. Publishers: The C. V. Mosby Company, 3523-25 Pine Boulevard, St. Louis, Missouri.

Neurological Examination. An exposition of tests with interpretation with signs and symptoms. By Charles A. McKendree, M.D., Associate, Department of Neurology, College of Physicians and Surgeons, Columbia University. With a foreword by Henry Alsop Riley, M.D. Contains 280 pages with 88 illustrations. Price, cloth 3.50. Publishers: W. B. Saunders Company, West Washington Square, Philadelphia, Pennsylvania.

Addresses On Surgical Subjects. By Sir Berkeley Moynihan, Bart., President of the Royal College of Surgeons of England. Contains 348 pages, illustrated. Price, cloth $6.00. Publishers: W. B. Saunders Company, West Washington Square, Philadelphia, Penn.

Partnerships, Combinations and Antagonisms in Disease. By Edward C. B. Ibotson, M.D., B.S., London, Fellow Royal Society of Medicine, London. Old inexact conceptions as to diathesis, infection, immunity, etc., have been revolutionized by researches and discoveries in physics, biochemistry and bacteriology. Increasing knowledge of the endocrine glands, of the blood plasma and leucocytes, of the vitamines in food, of the vegetative nerve system, and of pathological chemistry; are all playing their part in our studies in immunity. Then there are age, sex, heredity, environment; including light and temperature. Contains 348 pages, illustrated. Price, $3.50. Publishers: F. A. Davis Company, 1914-16 Cherry Street, Philadelphia, Pennsylvania.

Constitutional Inadequacies. An introduction to the study of abnormal constitutions. By Nicola Pende, M.D., Professor of Clinical Medicine, Royal University of Genoa, Italy, translated by Sante Nacca-

rati, M.D., Sc. D., Ph. D., Associate Professor of Nervous and Mental Diseases, Post-Graduate Medical School of New York, New York City. Foreword by George Draper, M.D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, Columbia University; Chief of Constitution Clinic, Presbyterian Hospital, New York City. Contains 270 pages, illustrated. Price, $3.50. Publishers: Lea & Febiger, South Washington Square, Philadelphia Pennsylvania.

Pediatrics For the General Practitioner. By Harry Monroe McClanahan, A.M., M.D., Professor of Pediatrics Emeritus, University of Nebraska; Member of the American Pediatric Society; Ex-president of the Nebraska State Medical Association. The purpose of this book is to present a modern clinical picture of the diagnosis, treatment, and management of the diseases of infants and children under condition encountered by the family physician. Contains 606 pages with 230 illustrations. Publishers: J. B. Lippincott Company, West Washington Square, Philadelphia.

COMMUNICATIONS

To the Editor:

Herewith please find our check for $268.60 which represents your proportionate share of the surplus earned by the Cooperative Medical Advertising Bureau during 1928. This is a rebate of 8.44% as against 7.79% for 1927. Since the Bureau deducts only 20% from its monthly remittances to the Journals this return of 8.44% makes the actual cost 11.56% for all the service the Bureau renders the publications.

Your committee wishes to commend the editors and publishers who have so cordially and loyally cooperated with the Bureau in its efforts. There is no question that the Bureau can be made a strong central advertising department that can secure and handle all out of state advertising for the Journals, at less cost, and with less loss, than the individual Journals can do. We may be pardoned, if we stress this economic feature as a reason why the journals should make every reasonable effort to increase the efficiency of the Bureau, and make it in all respects their authorized representative and spokesman.

Delaware will begin the publication of a Journal in January. Dr. W. Edwin Bird, Dupont Building, Wilmington, will be the editor and Dr. M. A. Tarumianz, Farnhurst, the Business Manager. The Bureau will represent the Delaware Journal. We feel sure you will welcome Delaware to the ranks of affiliated State Medical Journals.

Mr. Mattson has just returned from an extended trip through the East and has been successful in securing several new orders for 1929. The general business outlook is good, and there is reason to think State Medical Journals will profit by the favorable conditions.

With the enclosed remittance we extend to you our best wishes for a Merry Christmas and a Happy and Prosperous New Year.

COOPERATIVE MEDICAL ADVERTISING BUREAU

Chicago,
Dec. 19, 1928.

NEWS ITEMS

The Sixth District Medical Society will hold its summer meeting at Indian Springs in June.

The Tri Counties Medical Society, composed of Calhoun, Early and Miller counties, met at Blakely on December 12. Officers were elected for 1929. Dr. S. P. Holland, Blakely, read a paper on Malaria; Dr. J. G. Standifer, Blakely, read a paper on Post Operative Tonsillectomy. Dinner was served at Lay's cafe.

The Georgia Medical Society, Savannah, met December 11 and elected officers for 1929. Dr. William H. Myers was appointed a member of the Endowment Fund committee. Dr. T. P. Waring is chairman. Other members of the committee are Dr. Jabez Jones and Dr. Lawrence Lee.

Dr. T. P. Waring, Savannah, attended the meeting of the Southern Surgical Association held in December at White Sulphur Springs, West Virginia. The next meeting of the Association will be held at Savannah, the date to be announced later.

Dr. M. E. Winchester, Director of County Health Work, attended the meeting of the Ware County Medical Society held at Waycross on December 5. He spoke of the importance of having dairy cattle and milk inspected as the whole means of stamping out Malta fever.

The Thomas County Medical Society met at the John D. Archbold Memorial Hospital on December 12. Dr. Hal M. Davison, Atlanta; Drs. Roy A. Hill and H. M. Moore, Thomasville, were on the Scientific program.

Dr. R. L. Rhodes, Augusta, attended the meeting of the Southern Surgical Association held in December at White Sulphur Springs, West Virginia.

Dr. J. R. Garner, Chief Surgeon for the Atlanta and West Point R. R. Co. et. al., Atlanta, accepted an invitation from the Industrial Medical Association of the Province of Quebec to deliver an address on "Industrial Man-Power" at the annual session of the Association held at Montreal, Canada, on January 9 and 10.

Dr. Stephen T. Brown announces the opening of offices at 205 Medical Arts Building, Atlanta. Practice limited to urology.

Dr. James L. Pittman, Jr., announces his association with Dr. W. A. Upchurch for the practice of urology. Offices in the Atlanta National Bank Building, Atlanta.

Dr. Joe R. Clemmons, Macon, was re-elected superintendent of the Macon hospital for 1929.

Spalding County Medical Society met on December 18. Officers for 1929 were elected. After the transaction of other business, the members were entertained at dinner at the Griffin hospital.

Dr. and Mrs. D. B. Harrell, Tifton, entertained the members of Tift County Medical Society on December 14.

Georgia Health Officers Association will hold its annual meeting at the offices of the Georgia State Board of Health, 4 Capitol Square, S. W., January 25 and 26, 1929. Program has been announced as follows: Address by Dr. L. G. Hardman, Governor; address by Hon. Robert F. Maddox, President, State Board of Health; address by Dr. T. F. Abercrombie, State Commissioner of Health; paper on County and State-wide Malarial Control by Dr. L. L. Williams, Surgeon, U. S. P. H. S.; A Privy Building Program in Floyd County by Dr. B. V. Elmore, Commissioner of Health, Floyd County; Preventing Tetanus Neonatorum by Dr. V. H. Bassett, Health Officer of Savannah and Chatham County; Organization of Tonsil Clinic in a Rural County by Dr. T. H. Johnston, Commissioner of Health, Coffee County; Physical Examination of Rural School Children by Dr. Geo. E. Atwood, Commissioner of Health, Ware County; Practicability of District Control of Malaria by Mr. Gordon Saussy, Mayor-elect of Savannah; Extension of Ellis Health Law by Messrs. Joseph S. Stewart and R. C. Ellis; Outline of Legislative Program for 1929 by Dr. T. F. Abercrombie.

The Fulton County Medical Society held its twenty-fourth annual meeting on January 3. Officers installed for 1929 were: Dr. Chas. E. Waits, President; Dr. Jas. N. Brawner, Vice-President; Dr. Howard Hailey, Secretary-Treasurer; Mrs. A. S. Harrison, Executive Secretary. Board of Trustees: Dr. W. E. Person, Chairman; Dr. Theodore Toepel, Dr. J. L. Campbell, Dr. Marion T. Benson, and Dr. E. C. Davis. Board of Censors: Dr. Hal C. Miller, Chairman; Dr. L. H. Kelley, and Dr. J. B. Fitts. The meeting was called to order by the retiring President, Dr. E. C. Davis. Dr. Frank K. Boland acted as toastmaster. Program follows: Installation of officers for 1929. Inaugural address by the President, Dr. Chas. E. Waits. Report of Committee on Awards by Dr. E. B. Block, Chairman. Presentation of Certificates of Twenty-Five Years' Membership to Dr. Archibald Smith, Dr. Wm. T. Jones, Dr. E. G. Ballanger, Dr. W. A. Upchurch, by Dr. W. B. Emery. Members who died during 1928: John B. Olmsted, W. P. Nicolson, J. B. Arteaga, and Dr. E. L. Daniel.

The Southern Medical Association at its last annual session held at Asheville, North Carolina, elected the following officers for 1928-9: President, Dr. Thomas W. Moore, Huntington, West Virginia; First Vice-President, Dr. Paul H. Ringer, Asheville, N. C.; Second Vice-President, Dr. Felix J. Underwood, Jackson, Mississippi; Secretary-Manager, Mr. C. P. Loranz, Birmingham, Ala.; Editor of Journal, Dr. M. Y. Dabney, Birmingham, Alabama. Physicians of Georgia were elected as members of the Council and Sections on Medicine as follows: Dr. W. P. Harbin, Rome, Counsilor; Dr. Stewart R. Roberts, Atlanta, Trustee; Dr. V. P. Sydenstricker, Augusta, Secretary, Section on Medicine; Dr. A. J. Waring, Savannah, Secretary, Section on Pediatrics; Dr. Lewis M. Gaines, Atlanta, Chairman, Section on Neurology and Psychiatry; Dr. Dr. J. R. McCord, Atlanta, Chairman, Section on Obstetrics; Dr. Henry M. Michel, Augusta, Vice-Chairman, Section on Railway Surgery; Dr. A. C. Shamblin, Rome, President, Southern Association of Anesthetists. Mrs. Jas. N. Brawner, Atlanta, President-Elect, Woman's Auxiliary to the Southern Medical Association.

OBITUARY

Dr. Claude F. Riden, member, Bostwick, Southern Medical College, Atlanta, 1887; aged 62; died at his home November 22, 1928, of apoplexy. He was born at Cumming and had practiced medicine in Morgan County for about thirty years. Dr. Riden was prominent in local business and political affairs, one of the most popular citizens and beloved physicians in his community. He was a member of the General Assembly of Georgia at the time of his death.

Dr. Micollius N. Stow, member, Jesup, Emory University School of Medicine, Atlanta, 1893; died at his home, December 14, 1928. He was born and reared at Dahlonega and had practiced medicine at Jesup for more than twenty years. Dr. Stow was a member of a number of secret orders. Surviving him are his widow, four sons, Norman, who is consul to India; F. Bright, Gainesville; Ralph, Live Oak, Florida; and M. N., Jr.; three daughters, Mrs. J. K. Harper, Thomasville; Miss Minnie Stow, Brunswick; and Miss Georgia Stow, Jesup. Funeral services were conducted by Rev. W. B. Feagins, pastor of the Baptist church, and Rev. Mr. Wright, pastor of the Methodist church. Interment was in the Jesup cemetery.

Dr. John Webb Lee, Columbus, aged 88; died at the home of his daughter in Columbus, December 5. He was born in Chambers county, Alabama, and when only a child moved with his parents to Newton county. Dr. Lee attended the public schools of Covington and Emory College at Oxford, later studied medicine in the colleges in Atlanta and Nashville. He served in the army during the War Between the States and engaged in many heroic battles. Dr. Lee wrote "Memories of the Sixties" and "Sketches of the Confederate Heroes." He practiced medicine for sixty-seven years. Surviving him are six children: Fitzhugh Lee, Mrs. Lynda Lee Bryan, and Mrs. Daisy Lee Turner, Atlanta; Mrs. C. A. McKibben, Columbus; John W. Lee, Jr., Syracuse, N. Y.; Clifton S. Lee, Los Angeles, Calif. Funeral services were conducted by Dr. Elam F. Dempsey and Rev. W. T. Irvine from the First Methodist church at Covington and interment was in the West View Cemetery.

Dr. John D. Cook, Cooksville, University of Louisville School of Medicine, Louisville, Kentucky, 1872; aged 80; died at the home of his daughter at 657 Cooper Street, Atlanta, December 3. He was born and reared in Cooksville and practiced medicine in his home community for more than fifty years. Surviving him are three daughters, Mrs. W. L. Harris, Atlanta; Mrs. N. N. Mason, Chester, Ga.; and Miss Edna Cook, Atlanta; three sons, C. R. Cook, Thomaston; E. Y. Cook, Clayton; and B. R. Cook, Atlanta. The body was carried to Cooksville and funeral services conducted from Corinth Methodist church and interment in the family cemetery.

NAUSEA AND VOMITING OF EARLY PREGNANCY

(Continued From Page 20)

use, point to some toxin or toxins arising from the products of gestation, some derangement of carbohydrate metabolism, or carbohydrate deficiency.

In the mild or neurotic types, luminal-sodium in my experience, has proven most valuable in establishing a nervous equilibrium, thus enabling the patient to retain and assimulate her food.

After a vicious cycle has become established and there is present both a starvation and dehydration, fluids and glucose are essential for recovery.

REFERENCES:

DeLee, J. B.—Principles and Practice of Obstetrics, Third Edition.
Williams, J. W.—Obstetrics, Fifth Edition.
Vaux, N. W.—Edgar's Practice of Obstetrics, Sixth Edition.
Tweedy, E. W.—Wrench, G. T., and Solomons, Bethel: Practical Obstetrics.
Luikart, Ralph—Jour. Obst. and Gyn., Vol. v, 1923.
Miller, H. W.—New Orleans Medical and Surgical Journal, May, 1924.
Balance of references omitted for lack of space.

OBSERVATIONS IN EUROPEAN CLINICS

(Continued From Page 23)

mation and later the surgical removal performed and external radiation used.

The Radium Institute uses, or did use, a higher radium dosage with a different method of application from the Memorial Hospital, and for the technique of application and dosage of the former I would refer you to the article published by Dr. George T. Pack, of the University of Alabama, in the July edition of the Southern Medical Journal. For Ca. of body of uterus, the surgical removal was used.

A large amount of work has been done and is being done in Vienna and Germany on the isolation and standardization of the ovarian harmone, and the harmone has been found present not only in the ovary but in the placenta and urine of pregnant women, and even in certain vegetables. It is standardized by the minimum amount necessary to produce aestrus within 24 hours in castrated mice. The product is then measured in mice units.

In conclusion I wish to thank the members of this society and the program committee for the privilege of speaking before you.

CHOREA

(Continued From Pge 24)

However, after this period the patient's condition very slowly returned to normal. The continuous movements of her head, arms and legs gradually became less marked. Her pulse rate descended from 144 to 88, her speech became coherent and distinct and at the end of three weeks she appeared to be in a normal condition.

During the patient's three weeks' post operative convalescence at the hospital she had a more or less continuous temperature of 99.8 degrees. She suffered from one mild attack of articular rheumatism confined to the left knee with large inflamed tonsils, and complained constantly of sore throat. She refused to have her tonsils removed and was strongly urged to return at an early date for their removal.

She barely recalled her trip to the hospital, did not remember her Caesarean operation and was surprised to see her baby on the 7th day after her operation. The baby was fed with breast milk from another woman and began to nurse her mother when 7 days old. Mother and baby left the hospital in good condition.

COLD CAUSED BY BACILLUS BRONCHISEPTICUS

Following exposure to an infected rabbit, a typical cold developed in a human being which was apparently caused by Bacillus bronchisepticus. The infection is believed by John E. Walker, Baltimore (Journal A. M. A., Oct. 13, 1928), to indicate that colds may be caused by many different bacteria, and that these bacteria are the organisms cultivated from the respiratory discharges during colds.

Health Examination Blank

Name..... Address..... Date..... 19.....

1 Age..... Looks..... Height..... Weight..... Theoretical Normal.....

2 Chest Expansion..... Abdominal Expansion.....

3. Posture..... Nutrition..... Appearance..... Skin.....

4 Superficial Glands..... Male Genitalia..... Hernia..... Hemorrhoids.....

5 Osseous Deformities: Arms..... Legs..... Feet..... Spine..... Chest.....

6 Lungs..... Heart..... Abdomen.....

7 Ears..... Eyes..... Nose..... Throat..... Teeth..... Tonsils.....

8 Temperature..... Pulse..... Respiration..... Blood Pressure.....

9 Ladies: Menstruation..... Uterine Disease.....

10 Operations.....

11 Diseases.....

12 Protection against diseases: Smallpox..... Typhoid..... Diphtheria.....

13 Urine: Sp. Gr..... Albumen..... Sugar..... Indican..... Acidity.....

14 Feces: Parasites.....

15 Blood: Wassermann.....

16 Habits of Eating: Meats..... Green Vegetables..... Fruits..... Sugars..... Starches.....

17 Habits of Drinking: Water..... Coffee..... Tea..... Alcohol..... Carbonated Waters.....

18 Home Sanitation: Living Quarters..... Sleeping Quarters..... Sewage..... Water.....

19 Use of Tobacco.....

Grade.....

Findings:

1.....

2.....

3.....

4.....

5.....

6.....

7.....

8.....

Suggestions:

1.....

2.....

3.....

4.....

5.....

6.....

7.....

8.....

.....M. D.

Key: Letter A—100—Excellent.
Letter B— 75—Slight Defect.
Letter C— 50—Needs Attention.

To arrive at the grade, add marginal figures and divide by their number. This will give the grade of the person examined. Keep the original and give the examined a copy with information which is best for him to know and to follow.

Blanks like the above form may be secured from the Medical Association of Georgia, 139 Forrest Avenue, N. E., Atlanta, at 1c each.

A NEW MEDIUM FOR GALL BLADDER RADIOGRAPHY

Tetraiodophenolphthalein in colloidal suspension is the latest development for visualization of the gall bladder. The use of this medium was described by Dr. Bernard Fantus in the J. A. M. A. of July 16, 1927.

As the result of subsequent research, colloidal tetraiodophenolphthalein is now available in a form stable toward the gastric juice and readily absorbable from the intestine. The dose containing grams of dye is given in a glass of water. Experiments covering a long period have shown that tetraiodophenolphthalein administered in this colloidal form, normally gives a distinct cholecystogram within twelve hours. It is claimed that the possibility of non-visualization is reduced to a minimum and that nausea, laxative action, or other discomforts are seldom encountered. In this new colloidal form, the chemical will be known as Chole-cysto-col and will be marketed by the Abbott Laboratories, North Chicago, Illinois.

INSULIN IN MAL-NUTRITION

(Continued from Page 33)

(2) Fischer, Louis and Rogatz, Julian L.—Insulin in Malnutrition—American Journal of Diseases of Children 31:363-372 (March) 1926.
(3) Vogt, E.—The Insulin Treatment of Nondiabetic Affections—Medizinische Klinik (Supplement), 23:169-188, (September 30) 1927.
Abstracted in International Medical Digest January, 1928. (Page 25.)
(4) Depisch, F.—Regarding the Effect of Insulin Injections in Forced Alimentation—Klinische Wochenschrift 6:2338. (Dec. 3) 1927.
Abstracted in International Medical Digest, March, 1928. Page 161.)
(5) Wiechmann, Ernst—Forced Alimentation by Insulin—Munchener Medizinische Wochenschrift 74:2207-2209 (December 30) 1927.
Abstracted in International Medical Digest April, 1928. (Page 220.)
(6) Appel, Kenneth—Farr, Clifford—Marshall, Harold—Insulin in Undernourished Psychotic Patients. J. A. M. A. June 2, 1928.
1112 Medical Arts Bldg.

POSITION WANTED

Young lady secretary with experience in laboratory and basal metabolism tests. Also experience in office work with physician. Address, M. R., care Journal.

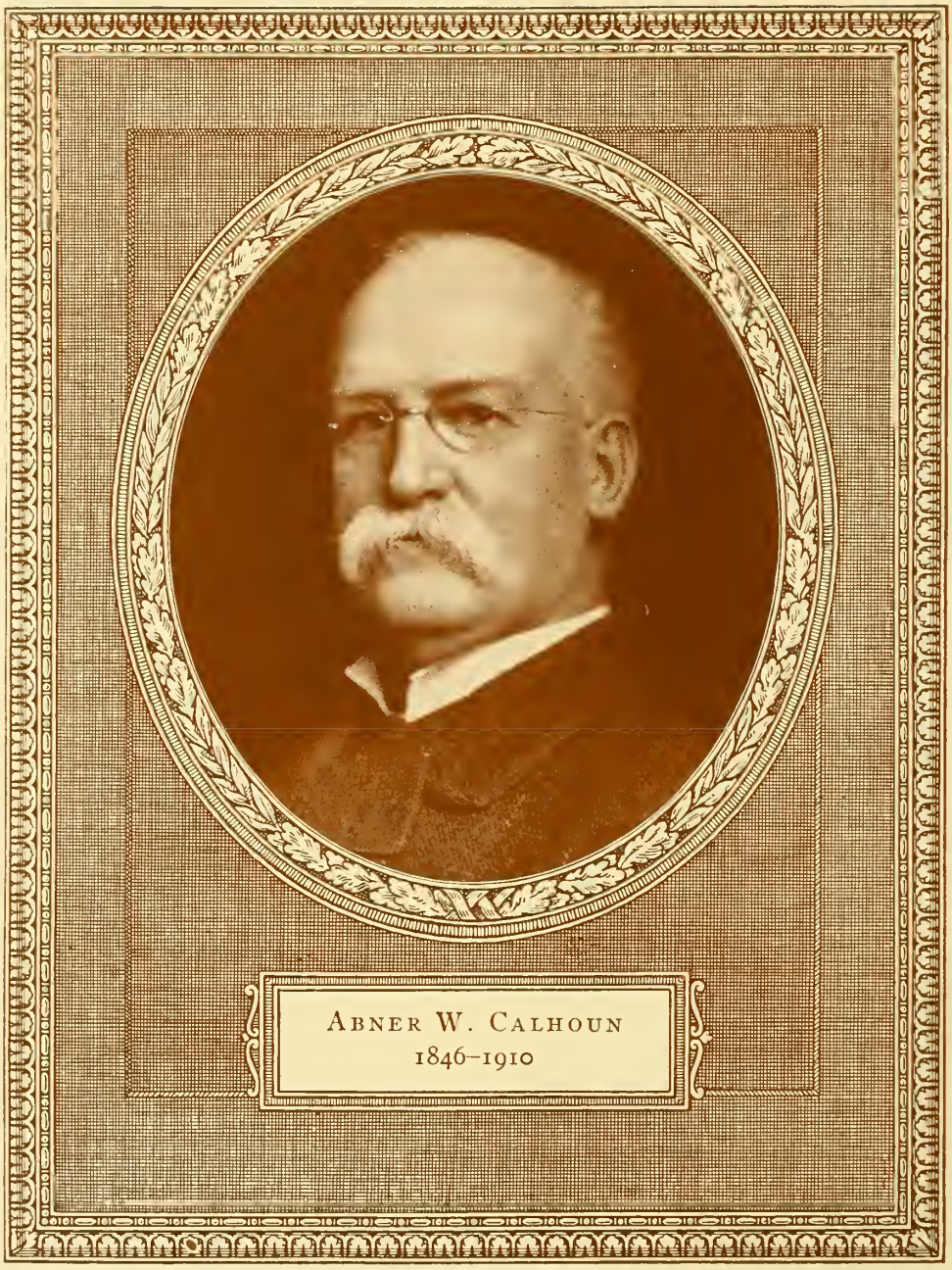
AWTRY & LOWNDES
FUNERAL DIRECTORS
AMBULANCE SERVICE

SITUATIONS WANTED

WANTED: Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians', Member The Chicago Association of Commerce.

Orders-Inquiries
Can be Secured by MAIL
60 pages
Send for FREE COPY
POLK'S REFERENCE BOOK and Mailing List Catalog
Gives counts and prices on over 8,000 different lines of business. No matter what your business, in this book you will find the number of your prospective customers listed.
Valuable information is also given as to how you can use the mails to secure orders and inquiries for your products or services.
Write for Your FREE Copy
R. L. POLK & CO., Detroit, Mich.
Largest City Directory Publishers in the World
Mailing List Compilers—Business Statistics
Producers of Direct Mail Advertising

The Tulane University of Louisiana
GRADUATE SCHOOL OF MEDICINE
Approved by the Council on Medical Education of the A. M. A.
Post graduate instruction offered in all branches of medicine. Courses leading to a higher degree have also been instituted.
A bulletin furnishing detailed information may be obtained upon application to the
DEAN
GRADUATE SCHOOL OF MEDICINE
1551 Canal Street New Orleans, La.



ABNER W. CALHOUN
1846–1910

CAT.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | February, 1929 | No. 2

BOSTON MEDICAL
MAY - 9 1931
LIBRARY

ABNER WELLBORN CALHOUN LECTURESHIP

DR. DE SCHWEINITZ'S TRIBUTE TO DR. ABNER CALHOUN

Being An Introduction to the Abner Calhoun Lecture

In the introduction to his lecture before the Medical Association of Georgia, Dr. George E. de Schweinitz paid tribute to the memory of Dr. Abner Wellborn Calhoun, a distinguished Georgian. It was under the auspices of the Abner Wellborn Calhoun lecture foundation, established to bring nationally and internationally known medical men to the meetings of the association, that Dr. de Schweinitz spoke. His introduction was as follows:

An invitation to take part in the sessions of the Medical Society of the State of Georgia is a welcome honor, twice welcome in that it includes participation in the exercises which pertain to the foundation of the Abner W. Calhoun Lectureship. For these distinctions I return my best thanks and express my high appreciation.

It is altogether fitting and proper that the memory of Dr. Abner W. Calhoun should be enshrined in this Foundation. His achievements as citizen, soldier, physician and teacher constitute a distinguished chapter in the chronicles of the history of this great state, adding luster to the records of many other notable accomplishments of which you are justly proud.

Fortunate in his parentage and the guidance thus bestowed, the register of the events of his life portrays the unfolding and development of his sterling character and his resolve "to do the work in hand with scrupulous and unaffected dignity, freely and justly."

Introduced by his father to the study of medicine, he matriculated in the Jefferson Medical College of Philadelphia, and was graduated the honor man of his class, well nigh sixty years ago.

Especially interested in the study of anatomy in his student days, he continued that interest when he went abroad shortly after his graduation. Attracted by the eminence of Hertel, he spent all available hours in his dissecting room, where, indeed, for a time he was his prosecutor. During this period he was offered the chair of anatomy in the Atlanta Medical College.

How better could he have laid the foundation for his future career as a notable exponent of one department of special surgery, wherein he was destined to attain a prominent place, than by acquiring proficiency in this important fundamental branch of the medical sciences.

Doubtless influenced by his father, he realized the necessity of gaining specialized knowledge and experience in opthalmology and otolaryngology, and with characteristic energy and ambition sought and obtained instruction in the clinics of the masters of those days in these departments of medical and surgical work.

Fully and admirably equipped, he returned to his own home, and was elected professor of ophthalmology and otolaryngology, in the Atlanta Medical College, of which his father had been one of the founders. He continued with praiseworthy ability to fulfill the duties of this distinguished post until the day of his death, serving not alone as teacher, but as administrator, and in all the ways he was able admirably strove for its development and improvement.

His success was immediate, and there gathered about him an extensive clientele, the most extensive this Southland has ever known.

From far and wide his patients came seeking the help of his clinical and his operative skill, and no one, rich or poor, sought this benefit in vain.

His commanding presence, his distinguished personality, his utter friendliness, his high ideals, his balanced judgment, his untiring energy, his manual dexterity—these were the assets of this gifted man, spent with fine liberality for the advantage of his adoring patients and of his admiring students.

His was the hand which restored to countless hundreds the priceless heritage of sight. He lived his life abundantly. Of him it may be said, as it has been of another great physician, "the very name of him was Victory."

Deeply concerned with the obligations and responsibilities of medical and surgical practice, he none the less found time to accept and faithfully perform the duties which pertain to organized medicine, to teach to the eminent satisfaction of his students, to contribute liberally and efficiently to the literature of the Department of Medicine and Surgery, to be an outstanding citizen imbued with the spirit of civic righteousness and of business rectitude.

He was a great physician and a great gentleman. He belonged to that rare group of men who find hidden joy in every perfect service, and who give fine example of the conduct of the higher life.

In my early days, long ago, it was my privilege to visit Dr. Calhoun. This was a happy circumstance in my life. The impressions then gained have never faded. I am honored in the opportunity of paying this tribute, albeit inadequately framed and spoken. But I pay it reverently, and in that reverence I know you join.

I quote some recently published lines, somewhat altered in their relations, and yet appropriate:

"And when he walked, his was the stride of one
Who lives a tireless servant of his land.
He knew that land and held its honor high.
There was no cedar tree in all his wood more finely straight than he.
He cannot be forgotten by his own."

CONCERNING HEADACHES*

Being An Essay of Certain Etiologic Factors and On Distinctive Features and Their Mimicries

G. E. DE SCHWEINITZ, M.D., Sc.D.,
Philadelphia

Headaches in their manifold manifestations and origins, from the time of Hippocrates, and doubtless, from still earlier periods, have deeply concerned physicians, no matter whether their practice was limited, or whether it covered the wider fields of general work.

From the medical standpoint, they constitute a universal subject. Although definitely symptomatic, that is, one of the interpretations of a local or general malady, headaches are so insistently in evidence and in such a variety of circumstances, that they well-nigh obtain in the minds of many the significance of a so-called clinical entity, or at least, a group entity. But thus to separate them from their etiologic relations is an error, which only too often has led to imperfect, not to say inadvisable, therapeutic measures.

Fully aware of the large considerations which the problems of this subject have received from the group of medical men, members of this Society, whom I now have the honor of addressing, I none the less venture the hope that it has not lost entirely its interest, and that it is not useless to revert to this topic on this occasion, when we may exchange our observations and our experiences, and, perhaps, help one another in our search for causative factors, and for the explanation of the mechanism of the widespread symptom which the French so aptly name mal de tete.

The literature is enormous; there is no intention to analyze it, nor to record it, except when published observations may be required to emphasize or to justify statements.

Because during the last three years it has been my privilege to contribute to discussions where headache was the chief topic under consideration, but on all these occasions chiefly from the ophthalmic standpoint, I cannot

*Read before the Medical Association of Georgia, Savannah, Ga., May 9, 1928. Invited guest.

avoid reference to, nor quotation from, the papers thus presented. But I shall endeavor in this essay to approach the problem, as it appeals to me, from a wider angle and in a somewhat different method of arrangement.

Anatomical Considerations. It is commonly stated that headaches, that is, mainly intracranial head pains, are, to use Auerbach's words, "perceived in the innervation area of the trigeminus, and perhaps in that of the sensory branches of the upper cervical nerves."

More broadly defined, headache is regarded as an interpretation of iritation or disturbance of the sensory or sensation centers of the brain, of the nerves or nerve-endings of the dura mater, and of the vaso-motor mechanism.

A number of endeavors have been made to trace pain pathways anatomically. Admittedly, some of these published observations are more or less theoretical. Auerbach's description of the nerve supply of the dura mater (1913), carefully checked by reference to anatomical authorities, much condensed, is as follows: The dura of the anterior part of the cranial vault and the anterior fossa of the skull is supplied by the meningeal nerve, which arises from the second division of the trigeminus. The anterior and posterior ethmoidal branches of the ophthalmic nerve are also concerned with innervation of the anterior fossa of the skull.

The tentorium cerebelli receives its nerve supply from the recurrent branch of the ophthalmic nerve.

The dura of the middle portion of the cranial vault, and also that of the middle fossa, is supplied by the recurrent branch of the mandibular division of the fifth or trigeminus nerve.

The dura of the posterior fossa is innervated by the tentorial nerves, and also by the meningeal branch of the vagus.

Evidently the dura of the base of the skull is more richly supplied with nerves than that of the vault. Clinical confirmation of this statement, according to Auerbach, resides in the fact that the basal dura is more sensitive than that of the vault, that a tumor of the base of the brain causes more severe headache than one of the convexity, and that the majority of severe persistent headaches are felt chiefly at the base of the brain.

Avoiding detail, the conclusions (1907) of the late Dr. G. A. Piersol, of the University of Pennsylvania, with reference to the nerve supply of the dura mater may be quoted: The nerves of the dura include principally sympathetic filaments distributed to the blood vessels, and sensory fibers. The immediate sources are meningeal twigs from the trigeminus, the vagus and hypoglossus. Those from the last source are really sensory fibers from the upper cervical nerves, and sensory nerves from all sources form a rich network of delicate twigs from which filaments have been traced to the inner surface of the dura, some of them ending in bulbous expansions.

This description conforms exactly with that recorded by Acquisito and Pusateri (1896), who have done much work on the nerve supply of the dura mater.

The conception of headache in the strict sense of the term, that is, pain felt in the interior of the skull, as a response to irritation of the dural branches of the trigeminus, does not, of course, exclude participation of associated ganglia and roots in this mechanism, for instance, violent occipital headaches caused by incarceration of upper cervical nerve-roots in an old scar, as in Edinger's well-known case (quoted by Auerbach). Or, in the event of disturbed function, for example, in an eye, that the sensation may not travel over fifth pair nerves and be interpreted in distant terminals; or pain impulse may not pass from the Gasserian ganglion to the fifth nucleus and from there to the optic thalamus and to the cerebral cortex.

Also, in many uncomplicated headaches, the closeby sensory nerve-supply areas may predominate in revealing pain-sensation, and distant districts fail to come into consideration.

One difficulty in endeavoring to trace the pain routes along the nerve filaments in the brain membranes resides in the differences of opinion as to their quality, character and distribution. It is usually stated that the arachnoid has no nerve supply, and that the pia supports only sympathetic fibers, or, as Ralph

Fenton (1927), puts it, "nerves of sensation . . . have so far not been demonstrated in the arachnoid or the pia mater."

Piersol, however, in addition to the sympathetic fibers freely present in the pia, describes other nerve fibers, probably sensory in function, which occur in small numbers, together with terminal bulbous expansions and tactile corpuscles.

Even more definitely in disagreement with previously recorded views is the opinion of Dr. Charles Elsberg. I quote, with permission, a recent letter:

"I do doubt very seriously if headache is due to pressure on the dural nerves in increased intracranial tension, as I have made many investigations during operations under local anesthsia which have seemed to demonstrate conclusively that the dura, excepting in the region of the meningeal vessels, is insensitive to pain. The only location in which I have found the dura sensitive is along the course of the meningeal vessels and at a point just below and outside of the optic foramen. In the latter instances, however, I could not be certain that the tenderness was actually due to the dura itself. Furthermore, I am not at all certain that the dura, especially its inner layer, has any nerve supply at all excepting perhaps from the sympathetic. While there are undoubtedly a variety of causes for headache, I do not believe that the headache of increased intracranial pressure is due to stretching of the dura. I hope that this will give you a general idea of my views, which may or may not be correct."

Evidently the anatomical tracings of the pain pathways thus far recorded, and which cannot be disregarded and which possess certain advantages, are not entirely satisfying.

Three years ago, Sir John Parsons, in his Bowman lecture, after a discussion of nociceptive sensory impulses, which he regards as "protopathic," and the sensory responses typically so, states that there is good reason to think that this conscious response is subserved anatomically by the optic thalamus, and then proceeds as follows: "I may interpolate here that I regard the pain of headache as typically protopathic and thalamic in origin;" he adds, "no region of the cortex has been assigned to pain (Sherrington). It is probable that there is no cortical projection of these fundamentally protopathic impulses."

Dr. Charles Elsberg, although his paper has not yet been published, in his remarks on headache, made three years ago, especially that of increase intracranial tension, enunciated a similar theory based on observation and experimental research.

Summarizing the somewhat variant conclusions which have been reached with respect to the pain pathways of headache from the anatomical standpoint, it may be said:

(a) Internal headache, that is, one which is experienced within the cranium, depends upon irritation of the trigeminal supply of the dura mater.

(b) Such irritation, however, is not always alone concerned with peripherally situated sensory nerves, but may depend upon one which affects the associated ganglia and nerve-roots, the pain being, to use Auerbach's expression, "projected into the area of distribution of the nerves concerned."

(c) In many uncomplicated headaches the pain perception is experienced in an area contiguous to that of the tissue or organ whose function or structure is disturbed by an exciting cause.

(d) Doubt has been expressed that the head pain of increased intracranial pressure is a response from irritation of the dural trigeminal supply, this membrane having been shown to be largely insensitive. (Elsberg.)

(e) The theory is advanced that the pain of headache is protopathic and thalamic in origin, conscious response to sensory impulses being subserved anatomically by the optic thalamus. (Parsons), that is, it is probable that painful impulses do not reach the cortex at all in their elementary form, but that they are essentially thalamic. (Head quoted by Herrick.)

Mechanism of Headache. As. C. Judson Herrick has said, few neurologic problems are more involved than those which are concerned with the nerves of painful sensibility. Apparently, as he further remarks, "most sensory nerves upon occasion may function as pain nerves."

Without any attempt to discuss these complicated questions, it would appear that an organ or tissue may on account of disturbances of normal function, abnormal effort,

inflammation or excretion of toxins, become a source of irritative impulses which ultimately eventuate in pain, that is, for our purpose, head-pain or headache, localized or diffuse in its interpretation.

The source of irritation may be one which acts, for instance, directly by pressure, or indirectly, for example, through the agency of bloodvessels which have acquired a state of contraction, that is, vasomotor spasm, or one of dilatation, that is, a vasomotor hyperemia, or by means of a toxin, for example, one which develops during fever, or from a gastric, renal or hepatic disorder, or through the instrumentality of a substance which exercises a toxic influence, e.g., alcohol, coffee, tea, etc.

Hence for clinical purposes headaches are grouped into those which are in origin mechanical, toxic or reflex, being a classification which is convenient, even though it may not stand the test of strict scientific examination.

Painful Head Zones and Distinctive Features. In many diseased conditions local areas of pain have received attention as diagnostic indications, for instance, Clado's or McBurney's point in appendicitis, or a spot of special abdominal tenderness in gastric or duodenal ulcer.

In like manner, such indications, according to the seat of the pain, have been tabulated with respect to headache and numerous diagrams have been constructed illustrating zones of pain in the skull, which have been assumed to be characteristic of the cause of the head pain. Thus an oval area above the brow has been selected as the site of predilection for an ocular headache; a similar larger area at the vertex for a neurasthenic headache; a space at the top of the head for a nasal headache; the brow surface for a maxillary sinusitis headache; an occipital space for a uterine headache; a tempero-occipital situation for a dental headache, etc.

But the classification of headaches with respect to their supposed etiology, not only according to their specialized location, as just recited, but according to their characters and manifestations, has attracted, one might almost say, over attracted, many physicians.

Such expressions as "he has a typical eyestrain headache," " a representative gastric headache," "a marked pituitary body headache," "a pathognomonic sinus headache," "a significant vascular hypertension headache, etc.," are frequently heard in consulting rooms, and find place in the record sheets of case histories.

Examples of such classifications are: The pressure pain, bandlike around the skull, with vertex distress ascribed to neurasthenia, in its elaborate development known as Casque neurasthenique of Charcot; the acute pain beginning above one or other brow and expanding over the forehead, so constantly attributed to eyestrain; the intertemporal distress imputed to pituitary body dysfunction; the bursting, boring, gnawing generalized headpain, often associated with projectile vomiting, indicative of intracranial neoplasm, etc.

Attempts, even more specialized in location, have been made, for instance, the browpain of eye-strain is ascribed to refractive error, while an occipital headache is presumed to suggest the strain due to ocular muscle imbalance; the discrimination between headache-areas caused by frontal sinusitis, sphenoiditis and ethmoiditis; the varieties and position of headaches caused by neoplasms of the base of the brain and those of the cortical area believed to depend upon different degrees of sensitiveness of the dura in these areas, as has been already noted.

In general terms, such classifications and locations as have been described are regarded by physicians, and indeed, by the laity, as "distinctive features," or, more cautiously, as "suggestive signs."

Now there is no intention to deny that the headaches named as examples do occupy the areas described more often than others elsewhere located in the cranium, nor to disregard "distinctive features" as something of value in directing the attention of physicians to the origin of the pain, that is, the true cause.

But in all diagnostic efforts there is always real danger of falling into error by trusting alone to such indications, locations, and manifestations, for the simple and well-known reason that headaches constantly, and

often conspicuously, depart from a standard or type. It does not do to trust too implicitly to labels; analysis of the contents of the vessel may reveal something differing widely from the attached classifying name or phrase.

In our analytical methods designed for the purpose of detecting the etiologic factors, three agents, or reagents, to continue the analogy, are required: (1) A careful history; (2) Expert clinical and laboratory investigation, and (3) co-operation, often necessary between the special and the general practitioner.

Before proceeding with a critical investigation of the so-called "distinctive symptoms," it is desirable to repeat certain well-known facts, which, however, only too often are neglected to the detriment of diagnostic investigation:

1. The organ or area which, owing to disturbed function or inflammation, gives rise to headache, may itself be entirely free from pain.

2. The dysfunction of such an organ or area may be trifling, and yet be as effective, or often more effective, as a pain-producer than where gross defects are present.

3. Many patients have two or even three kinds of headache which require differentiation.

4. Statistical information, with reference to the comparative frequency of the various types of headache, is of academic interest only, and for obvious reasons its relative value as a diagnostic index is a small one.

5. A potential cause of headache may exist for a long time, when it becomes suddenly mischievous, owing to increased sensiveness of the brain from moral, mental or physical causes.

6. Obviously the habits of the patient, in the widest acceptation of that term, rank among the potent exciting causes of headache; less obviously, but equally important, are the patient's methods of work and the conditions pertaining to his environment during his working hours.

I pass on now to a review of the so-called distinctive features of a few well-known types of headache.

1. *Pituitary Body Headaches.* There are some interesting disagreements with respect to hypophyseal headaches, as they are called, and their distinctive features. Thus in the opinion of some authors it is possible, in most cases, to distinguish pituitary headaches from others of far different origin, the more general belief, however, being (and this is the correct one) that there is no type of headache which without associated symptoms justifies such a statement.

Again, there is a divergence of opinion in so far as the severity of such headpains is concerned. Admittedly severe, they are generally less intense than those of cerebral or cerebellar tumor, and Frazier is of the opinion that only in exceptional cases should the headache itself be regarded as sufficiently urgent to decide the question whether operation should or should not be performed, although this is often an important factor in determining operative interference in cases of cerebral neoplasm.

In sharp contrast with this opinion is one quite recently expressed that these headaches are "devastating" in character, and just for this reason, if for no other, operation is not only justified but required.

Five years ago, I examined 120 published case records of pituitary disorder determined to exist by autopsy or operation, and found that in 75 per cent of them headache was a "conspicuous symptom," and in my record of approximately 100 cases this symptom was frequently a notable one.

Now what were the characters of headaches revealed by this investigation? Grouped, the following were found (I quote here from my Bowman lecture 1925): (1) Occipital and radiating, with or without nausea and vomiting; (2) parietal, radiating to the top of the skull; (3) primarily frontal and later bitemporal, increased by tipping the head sideways; (4) bitemporal, indicated by the patient in that the hand is placed on each temple, with the statement that the pain is midway, i.e., intra-temporal, or the finger is placed midway between the eyes, pointing backward, or at the interior fontanelle, pointing downward—in other words, these lines of direction, thus indicated, converge toward the pituitary region (Timme's type); (5) unilateral and temporal, simulating migraine,

in some cases with prodromal visual phenomena—phosphenes, vibratory scotomas, and temporary hemianopsia.

The character of the pain, "boring" rather than "sharp and neuralgic," may be continuous, or may be subject to remissions, just as they occur in cerebral or cerebellar tumors; it may assume none of the types described, being general or changeable as to its location; it may suddenly leave and remain absent for longer or shorter intervals; and the history not infrequently demonstrates that it has been actively present for long periods of time, even years before gross visual disturbances arise, or before the true nature of its origin has been recognized.

The various grades of severity exhibited by pituitary headaches may, of course, be concerned somewhat with the character of the lesion and its relation to surrounding tissues. At one time the intensity of the pain was supposed to depend on the size and disposition of the sella turcica, until it became evident that head-pain may be present in all degrees, no matter whether the sella is normal, small or enlarged, in all its diameters.

On the other hand, however, the diaphragma sellae undoubtedly has an influence on the intensity of hypophyseal headaches, in that it is subject to marked variation—sometimes tightly stretched, practically complete and dense; sometimes frail, fenestrated, or present only as a narrow rim.

Obviously the enlarging gland in the one instance would be associated with greater cephalalgia than in the other, where expansion would be less interferred with.

An important clinical observation, already noted in other types of headpain, is that pituitary headaches may be present for long periods of time before the true nature of the disorder is recognized, that is, before ocular signs, general symptoms and x-rays present their evidence.

Do any distinctive features pertain to such prodromal headaches? So far as I know, they do not. Such headaches have been mistaken for those which are caused by many other factors—eye-strain, gastrointestinal disturbances, vascular hypertension, renal insufficiency, etc.

Is there anything in the way of expert examination which furnishes a "lead" to the true etiologic factor? Yes, I think there is, not always, but certainly in some cases. Although corrected vision may be normal in the ordinary sense of that term, the object looked at, a letter, for example, is not clearly defined. I have ventured to describe the condition as one of "prodromal amblyopia" due to beginning block of the light-sense. Cushing and Walker attribute it to small central unchartable color defects. Bruno Fleisher called it "nebel-sehen" (misty vision). I think the improvements in detecting minute deformations in the visual fields at its central and paracentral area will render even such defects "chartable."

All this is a preamble to the suggestion that in cases of long-standing, persisting headache, unexplained by any of the usual causes, the central and supra-cecal area of the field shall be expertly investigated, with minute white and colored test-objects. It is a good example of the need, always present, of coordinated co-operation between general and special practitioners in their study of persisting headache problems.

The transitory pituitary body symptoms during early adolescence have been elaborately studied. In one type in girls menstruation is delayed for a year or more beyond the time of its normal appearance; the subject gains weight, begets an ungainly figure, has a somewhat childish mentality and suffers severely fronto-temporal headache and stubborn asthenopia. The general conditions so evidently interpret hypophyseal dysfunction, that a mistake in diagnosis should be well-nigh impossible, and, moreover, rapid cure follows the administration of pituitary body extract. And yet how often, in spite of the evidence conspicuously present, have patients thus afflicted escaped an exact diagnosis and proper therapeutic measures.

Thus far I have not included true migraine in the list of headaches which are under discussion because of its complexity. Nor shall I venture in this field (record of the various theories advanced to account for its etiology would fill a chapter) save only to refer to Mr. J. Herbert Fisher's assumption that a

periodic temporary swelling accompanying functional over-activity of the pituitary body explains real migraine better than any other hypothesis.

Plausible as Mr. Fisher's arguments are, his theory has by no means received general recognition, although it is well known that during the menstrual periods, when temporary tumefaction of the pituitary body certainly takes place, hemicrania closely resembling true migraine may supervene.

It is a well recognized clinical fact that hemianopsia, being a premonitory symptom of true migraine, occasionally may ultimately become a permanent visual field defect. Whether this happens in so-called pituitary body migraine I do not know.

The stimulus which repeated pituitary enlargements during pregnancy may give to a permanent tumor formation has been repeatedly demonstrated. I do not know whether frequent pituitary migraines can exercise a similar influence.

Sometimes in various types of hemicrania, in place of the usual prodromes (hemianopsia, scintillating scotomas and fortification lines), remarkable visual hallucinations appear—shadowy figures of men, women and children, articles of furniture, animals; sometimes pleasant to behold, sometimes hideous. Similar phantasmagoria have been noted in association with pituitary headache (types 4 and 5), being unusual and rather startling phenomena.

It is evident, therefore, that considerable diagnostic acumen must be exercised in an endeavor to discriminate between true migraine of various origins; migraine due to temporary tumefaction of the hypophysis; headache caused by permanent pituitary dysfunction, and hemicrania which substitutes visual hallucinations for the usual prodromes.

Perhaps I have detained you too long in discussing these anomalous types of headache. I hope not. They are important. Pain is an artful deceiver, and at times a great mimic.

Sinus Headaches. The laity are readily attracted by a "medical phrase," and in our time the term "sinus headache" is almost a household word. But what the laity and also a good many doctors have failed to realize, as Fetterolf has recently said, is the fact that there may be present decided purulent sinusitis, and yet no headache, at least none that is included in the catalog of "distinctive features."

Be that as it may (and I depend not alone on personal experience, but chiefly on observations detailed in conference and consultations with colleagues expertly informed in these matters), among the various headaches encountered in general and specialized practice, those caused by sinus infection are probably more often portrayed by such "distinctive features" and by definite locations in the cranium than those of other well-known origins.

As to the location of sinus headache, Ross Skillern's carefully worked out schematic illustration is a valuable guide, and taken into consideration with other indications and technical examinations, affords highly important information with respect to the partiality of sinusitis-pain for definite areas of the skull.

One immediate cause of sinus headache, in most instances, is a pressure exerted by the swollen and inflamed mucous membrane on the sensory nerve filaments ramifying within it. A second cause is probably toxic, i.e., a toxin acts upon such nerves, having been liberated by the infecting microorganism. On this mechanism Skillern insists, and is supported in his contention by some of his colleagues. Those who disagree with this contention point out that headaches do not occur if the sinuses are well drained and well ventilated, even though pus formation is actively in evidence. (Fetterolf.) I cannot enter into a discussion of a third factor—vacuum headache, concerning which there is much difference of opinion.

This I think we may conclude: It is, broadly speaking, correct to maintain that there are "typical sinus headaches," but not that a headache, because of certain characteristics and locations, *must* be due to sinusitis.

Furthermore, all experience teaches that the severity of sinus headache depends upon the nature of the sinus infection and the degree of congestion. Hence, it may be split-

ting or throbbing. It may appear soon after the patient awakes in the morning, continue until about the middle of the day, and then suddenly cease, to recur again the next morning, and in the same place unless the affection has spread to a neighboring cavity. Such conditions, to quote Skillern, "are practically typical of sinus disease," but exceptions are frequent.

Very successful efforts have been made, as already noted, to discriminate between the headaches caused by the frontal, the sphenoid, the ethmoid and the maxillary sinuses.

Time does not permit any elaborate discussion of this phase of the subject, but there appears to be rather general agreement that ethmoidal inflammation is apt to create a headache in the parietal region, but also one between the eyes and above the nose, the sensation being that of a wedge prying apart the tissues (Skillern). Such manifestations are strongly suggestive, and yet, curiously enough in chronic hyperplastic and chronic suppurative ethmoiditis, headache may be an inconspicuous symptom. Again, pain may be intense, and yet the pathologic process in the ethmoid but little produced, and this is not alone true of the ethmoid, but of other organs or tissues, as previously noted.

Skillern and others regard the headache of chronic sphenoiditis as more typical than that of any of the other sinuses. It is a pressure pain rather than an acute or throbbing one, and may extend from the occiput to the temporal region and post-auricular area.

The pain of frontal sinusitis usually elects the supraorbital area for its location, but may spread to the parietal region, its severity depending on the character of the process; it is often associated with mental depression in an almost characteristic manner, of which I shall speak later.

Oddly enough, the pain of maxillary sinusitis is frequently located over the area of the frontal sinus, ipsolateral to the affected antrum. The pain is regarded by some authorities as one due to occlusion of the fronto-nasal duct—therefore a vacuum headache.

Concerning this point, Fetterolf writes as follows: "The theory of vacuum frontal headache in connection with maxillary sinus appeals to me as more reasonable and rational than the overworked "reflex hypotheses."

Thus, a patient in my care suffers agonizing pain over her left frontal sinus. If a cotton-wrapped probe dipped in an ephedrin solution is passed through her naso-frontal duct, the pain will almost instantly disappear, although there is no discharge of secretion. Moreover, vacuum headaches have been most frequently reported in association with those sinuses whose drainage and ventilation pathways are most easily blocked, the order being frontal, maxillary, ethmoid and sphenoid."

Eye-strain Headaches. Naturally, I cannot avoid reference to eye-strain headaches, which are responsible for from thirty to sixty per cent of those of functional origin.

Do eye-strain headaches reveal distinctive features? Suggestive they certainly may be, but not pathognomonic. Such headaches may vary from a moderate frontal distress to a violent explosion of pain, may be localized in any portion of the cranium, may be associated with nausea and vomiting, may be bilious in type, and may simulate a true migraine.

Certain characters should be noted: The frontal area is most frequently selected, but the pain may have its location in the temples, parietal or occipital region, or at the vertex.

An attempt to discriminate between those headaches caused by refractive error and those due to faults in muscular equilibrium has often been made. Admitting that convergence insufficiency often causes occipital headache, that pain above the brow of hyperphoric eyes is common, that tempero-parietal distress is frequently the result of esophoria, that correction of a refractive error may remove a frontal pain but fail to influence an occipital headache, which disappears only after the muscle imbalance has been corrected, and admitting, too, that it is wise to keep these possibilities in mind, a warning is sounded that they shall not deter the examiner from the investigation of other factors which may be operative.

I quote, even though in part it is a repetition of what has been said, in concluding

this reference to eye headaches, a paragraph published some years ago, which in condensed form records the experiences of well-nigh forty years of practice:

In the list of errors of refraction, simple and compound astigmatism and hyperopia are the most potent; the eyes themselves may be free from pain, and the headache none the less be ocular in origin; physical vigor does not exempt the patient from ocular headache, although often such headaches do not appear until physical and mental powers fail; there are no pathognomonic features of eye headache; they may be suggestive, not more; they may be situated in any portion of the cranium and be of any degree of intensity, and may closely resemble those usually ascribed to other causes; they may immediately follow eye effort, or be apparent only long after the ocular work is completed; eye work at close range is not a *sine qua non* of their development; long distance ocular effort may be equally effective; ocular headaches may be acute, sometimes chronic, but chronicity is usually suggestive of some other factor, direct or contributing; there may be recurrences of headache, which appears at times to exercise a certain quality of selection with respect to its "agent provocateur," thus, for example, writing may be pursued with impunity, but reading invariably and quickly produce head-pain, moreover, in precisely similar circumstances.

Although not exactly pertinent to the matter in hand, it seems proper to emphasize the well-known fact that headache is only one of the interpretations of eye-strain due to refractive error and muscle imbalance, and that either in association with it, or in its absence, many other symptoms develop: Reflex nervous disturbances, vertigo, pseudochorea, habit spasm, melancholia, tachycardia, night terrors and indigestion—the list is a long one.

Also, and this is more to the point, instead of head-pain in one or other of its cranial locations, the pain may be situated in the nape of the neck, between and under the shoulder blades, or deep in the mastoid, and being, as it were, thus anomalously placed, the eyes themselves being painless (as is often the case) the incautious examiner is led astray in his conclusions.

Neurasthenic Headache. Elsewhere I have referred to the indifferent value of statistical information with respect to the various types of headache.

For instance, a well-known author accords the first place after migraine in the list of etiologic factors to neurasthenia. And yet surely this is not exactly an accurate attitude of the diagnostic mind. Nervous exhaustion follows the waste of mental and physical energy as the result of a number of influences, and in the symptom-complex thus produced headache admittedly is a frequent member.

Thus, the long-continued distress of an unconquered eye-strain may be the prime factor in the development of neurasthenia and the associated headache. The ultimate accurate correction of the refractive or muscular error is a *sine qua non* in the dissipation of the headache and in the rescue of the wrecked nervous mechanism. But often a complete cure is obtained only if additional measures are employed to build up the system and replace the lost energy.

A similar relationship may readily be established between the neurasthenic state and a chronic sinusitis, a focal infection, and a variety of disturbed functions.

But the group of symptoms which comprise neurasthenia, psychasthenia and hysteria, including headache, may depend not only upon a functional disorder of the nervous system, but may be the outcome of an organic disease—an implantation, as it were, on an organic basis.

It is not a little astonishing, as Cushing has pointed out, how frequently the case histories of brain tumor subjects indicate that for a considerable period of time prior to the detection of the real trouble the symptoms have been ascribed to hysteria or neurasthenia, and the true diagnosis has not been attained until, as Cushing puts it, the diagnosis is read by means of the ophthalmoscope in the eyeground.

But sometimes this "reading" is not available, or rather, the characteristic fundus picture is delayed in development. Thus, a male patient, with all the signs of mental

and physical exhaustion, associated with the so-called "distinctive headache" of that condition was treated as a "rest-cure case" for a long period of time. It was only a few weeks before his death on account of brain tumor, that the ocular sign of increased intracranial tension, namely, choked disc, appeared. There was no lack of investigation of this patient by competent observers, but always with an over-emphasis on the neurasthenic condition, to which the head-pains and other symptoms were attributed, a typical example of the implantation of a neurasthenic state on an organic lesion. Also an excellent instance of the need of frequently repeated ocular investigations (field-testing and ophthalmoscope) in cases of prolonged neurasthenic manifestations of uncertain origin, including the so-called distinctive headache.

To the varieties of headache just discussed, and for the purpose of illustrating cranial areas of pain-location and distinctive or suggestive features, many more might be added of other origins: The dull generalized headache of vascular hypertension and arteriosclerosis, often associated with vertigo; the acute head-pain and nausea due to gastric disturbances and enterogenous intoxication; the persistent headaches of increased intracranial tension from cerebral and cerebellar neoplasms, often combined with explosive or projectile vomiting; the pressure-like occipital distress due to pelvic disorders, etc. These are only examples constantly encountered.

Such manifestations may be, and often are, strongly suggestive of their etiology, even perhaps distinctive. But like those discussed more in detail, there are many departures from type, and all require for their exact elucidation elaborate clinical and laboratory investigation and the use of instruments of precision. We must not trust alone to symptoms.

Historically speaking, the recognition of the precise etiology of headache has been a gradual one; but the development of discriminating differential diagnostic methods is more than gratifying.

Such terms as "sympathetic," "nervous," "congestive," "neurasthenic" headache, as Ross Skillern has well said, represents a misleading phraseology, which is happily becoming obsolete.

But even now a good many practitioners have not entirely escaped the danger of too insistently accepting as etiologically significant the so-called distinguishing characters of headaches and their designated sites of predilection.

Although universally recognized as symptoms, they are such definitely constant ones that the temptation to annihilate the distress they create, without endeavoring to find and to eliminate their exact cause, is ever present.

Therefore it happens that perfunctory prescribing, of which doubtless all of us are at times guilty, has not been driven from the field of therapeutic endeavor as completely as is required in the circumstances.

It may be that too monotonously I return to this subject, but for well-nigh forty years much of my professional work has dealt with the differential diagnosis and treatment of headaches, and realizing my own derelictions, I venture to reiterate this warning, even at the risk of provoking your criticism.

Some Mimicries. As a concluding phase of the topic of this afternoon, with the aid of a few condensed illustrative case histories, some of which have been previously utilized, I shall endeavor to portray what I have named the "mimicries of headaches and their so-called characteristic features." Some of these case histories appear to me to contain observations of unusual interest.

Case Report

A young woman, long the subject of fronto-occipital headache of bursting and expanding character, often with nausea, and always associated with intense flushing of the eyes resembling an episcleritis, developed pallor of the discs and bitemporal hemianopic scotomas. Prior to the detection of this field distortion, the patient had been subjected to all manner of treatment based on the supposition that the headaches were of gouty, rheumatic, gastro-intestinal, ocular, etc., character. Many intranasal examinations had been made, which revealed only vaso-paretic turbinals, the treatment of which was ineffectual. When the hemianopic scotomatous defects were discovered and the discs began to be pallid, it was believed that the headaches depended upon some basal lesion, per-

haps a chiasmal retrobulbar neuritis in association with a localized meningitis. X-ray examinations (made at a time when they were not as accurate as they are at present) were practically negative. Alterative treatments, notably mercurials and iodids, were tried, but in vain. The headaches increased in violence and frequency. Finally, after discouraging failure for a long time of remedial measures, the sphenoid sinus was catheterized, and a few drops of pus found. A formal operative procedure was successful in producing a considerable period of relief, although later there were many relapses. Evidently the real cause of this headache was due to a long-time undetected sphenoiditis which caused the chiasmal neuritis, and not to a meningitis which was suspected.

This experience happened a good many years ago, and I realize that at the present time, with our expert modern methods of examination such a delay in arriving at a correct diagnosis would almost certainly not occur.

I am also aware that bitemporal visual field defects due to sphenoid sinus infection are disputed by some observers notably skilled as perimetrists.

In this connection some anatomical researches by J. Parsons Schaeffer, which I was privileged to study with him, made evident that a bitemporal field defect would seem to be possible as the result of sphenoiditis, namely, where the optic chiasm rests upon a horizontal or oblique chiasmatic sulcus, and where the anterior border touches a vertically deviated chiasmatic sulcus. In the first instance the basal surface of the chiasma obtains a close anatomic relationship with the roof of the sphenoidal sinuses, and often with the walls of certain posterior ethmoidal cells. In the second instance the anterior border of the chiasma comes in intimate anatomic relationship with the posterior wall of the sphenoid sinus.

An interesting similarity of the symptoms included in the Gowers-Kennedy syndrome (retrobulbar neuritis and central scotoma homolateral to a unilateral basal frontal lobe lesion, with contralateral choked disc), and those occasionally exhibited by patients with frontal sinusitis combined with spheno-ethmoid disease has been observed. Both have similar mental peculiarities: Impaired judgment, lack of concentration, disturbed mentality, sometimes suggestive of a form of melancholia; both may have severe fronto-occipital pain; both may have very similar ocular signs if the contralateral choked disc should be delayed in development.

W. L. Lillie, who has admirably contributed to our knowledge of basal frontal lobe tumors, thinks that the similarity of which I have spoken "must be thought of," but doubts if it could lead to any confusion, as brain tumors exhibit the distinctive element of progression. But that such confusion can temporarily arise I know, especially if there is co-existing sinusitis.

Very occasionally, the symptom-complex of eye-strain and of intracranial neoplasm is strangely similar in the absence of exhaustive investigation, because some of these eye-strain patients exhibit on ophthalmoscopic examination blurred nerve-heads, which may be difficult to distinguish from an early stage of papillitis or papilledema, but which really represent a pseudo-neuritis; and because the headaches present mutual resemblances.

Thus, a woman in the early thirties, her refractive error being a high hyperopic astigmatism, which, curiously enough, had never been corrected, and who had slightly prominent optic discs decidedly blurred, was the subject of violent headaches and nausea, and exhibited mental characteristics closely resembling those which may be part of the symptomatology of frontal (not basal) lobe tumor.

The surgeons in charge debated the propriety of intracranial exploration, although they did not actually reach this decision. As the result of prolonged mydriasis and the correction of the refractive anomaly all the general symptoms disappeared; the congested discs were proved to be typically pseudo-neuritic. An extreme example, I admit, and yet the case was puzzling for a time to all concerned, and well illustrates the mimicry of eye-strain head-pain associated with general symptoms, suggestive of intracranial neoplasm.

Ordinarily, because expert methods of examination are available, there should be no difficulty in distinguishing between spheno-

ethmoid disease and neoplastic intracranial lesions, but as you doubtless know, Cushing has rather sharply, and justly, criticized ill-considered formal sinus operations, where subsequent events have demonstrated that symptoms were due to cerebral tumor or to meningitis. Usually the differential diagnosis depends, in part, at least, upon ocular examinations (field, ophthalmoscope). The type of headache, therefore, is less important than the other indications.

Exceptionally, sinus disease (ethmoid, sphenoid) is responsible for a choked disc, in place of the usual axial neuritis or a papillitis. But, the disc changes in sinusitis are commonly unilateral; those in cerebral tumor almost always bilateral.

Once I examined a woman with the clinical and x-ray evidence of ethmoiditis, who had a left choked disc (+ 3-4 D.), in the third stage, and who had a partial cataract in the right eye, rendering it difficult to decide accurately whether this disc was beginning to be involved.

Her physician, owing to the fact that the patient had mental disturbances and severe headaches (a "nervous break-down" was his description), felt that she might have an intracranial neoplasm. However, operation on the ethmoid (which contained pus) by Dr. Fetterolf, was followed rather promptly by disappearance of all symptoms, local as well as general, and the patient today, eleven years after the operation, is in perfect health.

The evident reason for mentioning this case is that uncertainty in differential diagnosis may arise, but especially to point out that choked disc indistinguishable from one suggestive of increased intracranial tension, may interpret, rarely, to be sure, a sinus infection; and that the presence of such a choked disc, examined only ophthalmoscopically, does not *per se* certainly exclude sinusitis.

Many years ago, Lauder Brunton stressed the importance of "dental headaches," and some recent experiences have induced me to believe that they should receive greater attention and a better place in the nosologic index. I refer now not to dental pain, but to definitely placed headaches.

I have already briefly mentioned them, but it may be worth while to point out various observations, especially those by Lauder Brunton, indicate that a diseased molar in the lower jaw usually gives rise to a temporal or occipital headache, and that a dental infection in the upper jaw creates a temporal headache, rather further forward than that caused by an affected tooth in the lower jaw. When the incisors are infected, it is said that the head pain more commonly obtains a frontal or vertex situation.

Now the difficulty which attends the distinction between headaches of dental and of para-nasal sinus origin may be considerable, in spite of the fact that each is supposed to exhibit characteristic features.

Thus, a girl of twenty, healthy in all respects, became the subject of frequent headaches, usually extending across the forehead in a line with the upper margin of the orbit, and associated with tenderness over the root of the nose. Usually the head-pains appeared soon after arising in the morning; but also they were invariably excited by exposure to the wind. She discovered that if immediately on awakening, having slept lying flat without a pillow, she carefully, but none the less vigorously blew her nose, she could often avoid the pain. Every sign obviously pointed to the sinuses as the origin of the headache, and although the usual examinations were practically negative, repeated courses of non-operative treatment of the naso-pharynx and sinuses were undertaken without good effect. Correction of an astigmatism cured entirely what she described as her "eye headache," which differed entirely in its manifestations from the other types of headache from which she sharply differentiated it. X-ray examination revealed a painless upper molar somewhat out of line and tilted inward. Finally, a dental surgeon was induced to straighten this tooth and remove its neighbor, which was infected, in order to give the necessary room. The effect was almost immediately satisfactory, and now more than three years have elapsed, and the patient has been practically free from this kind of headache. Obviously this was a "dental headache," but it is also likely that the transmission of impulses through the trigeminal fibres caused a temporary congestion of the sinus mucous membrane, which added to the difficulty of detecting the real origin of the pain.

Such a case well illustrates the fact, previously briefly noted, that many patients

suffer two or more kinds of headache, which should be differentiated and which require different forms of treatment for their relief; that the primary source of irritative impulses may command two or more "reference areas," and that the predominant type of headache may strongly suggest an origin it does not have.

Headaches caused by toxins, that is, chemical substances, for instance, alcohol, coffee and tea, do not, I think, develop symptoms which belong to the so-called distinctive group. But they may originate a headache manifestation which is at times strikingly like others of totally different origin, for example, those which strongly suggest an origin which resides in the spheno-ethmoid region. In one such case, long under personal observation, the head-pain and its distribution was almost precisely like that which Skillern describes as indicative of sphenoiditis, and which was demonstrated to be due to the rather free use of coffee (not its abuse), the patient being in all respects an unusually healthy subject—the mimicry was almost perfect.

Such imitations may be ascribed to a gradually developing idiosyncrasy. It may be, however, that in such circumstances the sinuses are not entirely blameless in that, as already pointed out, even when indifferently pathologic, they are rather easily awakened into activity by alcohol, for example, and probably by strong coffee.

Attention has been called to the fact that eyes with refractive error may themselves be painless, may not produce the ordinary well-known headache, but replace it by pain in distant organs of the body.

It should be remembered, on the other hand, that when pain in and behind the eye exists, it is not necessarily one which depends on ocular dysfunction, for example, refractive error. Good examples are the blinding headache, associated with severe pressure pain, behind the eyes—a not uncommon manifestation during the climacteric period in women, recently emphasized by Gellhorn; the frequent ocular and periorbital pain entirely dependent on ethmoiditis, even where this is not especially active; the dull pain, usually associated with persisting asthenopia, chiefly in middle-aged women, the subjects of benign vascular hypertension, and exhibiting beginning arteriovenous compression in the retinal vascular supply; the eye-pain, often burning, caused by accidosis, gastric and intestinal disturbance; the curious point-like stabbing pain experienced by gouty patients. These are good examples of mimicry.

It is not necessary to extend this list. The lessons are obvious. Such patients, of course, require suitable correcting glasses in the presence of refractive errors, but that does not end the matter. Only too often because the pain is ocular, and the glasses fail to relieve, they go from office to office thinking previously prescribed spectacles "are wrong," to use the common expression. The glasses are not "wrong," but frequently it is the method of handling the situation which is at fault.

Admittedly, modern successful medical practice depends largely upon specialization and cooperation, and they must be coordinated. Certainly each physician should respect his own material, but in equal degree he should also respect the material and observations of his colleagues who specialize in single branches or departments, and each should be familiar with the need and value of the other's work. This is true of all the lines of medical and surgical effort should we hope to attain the highest type of success, and headaches with their varied manifestations, their problems and their complexities and their mimicries, are notable examples of the truth of this statement.

A. M. A. MEETING, TOURS AND TRANSPORTATION

Please do not make reservations for any tour, special route to travel to and from Portland, account of the American Medical Association meeting to be held this year, before the March issue of our Journal is published. We expect to advertise the best and most economical routes to travel, excellent accommodations, and tours to numbers of places in Canada and the West Coast.

SOME OBLIGATIONS TO ORGANIZED MEDICINE*

CHARLES E. WAITS, M.D.,
Atlanta

Mr. Toastmaster and Fellow Members of the Fulton County Medical Society:

I cannot begin this address without first expressing my sincere gratitude for the honor which you have bestowed upon me. To be chosen president of an organization whose membership consists of more than four hundred of the most esteemed citizens of a community, is an honor of which any one should be duly proud, and one which I shall prize and cheerish throughout the remainder of my life.

In accepting this honor, I do so with a considerable degree of humility, and at this point am constrained to appeal for your kind and sympathetic co-operation in my efforts throughout the year. The privilege of making an inaugural address allows one considerable latitude, however, let me assure you at the outset, that I shall try not to abuse this privilege. The subject of my remarks will be, *Some Obligations* to *Organized Medicine.*

The modern country medical society is perhaps one of the most important units of organized medicine. Some of the many privileges of membership are so well outlined in a recent issue of the bulletin of the Academy of Medicine of Cleveland and copied in the bulletin of the American Medical Association, that I cannot overlook this opportunity to pass them on to you.

Membership in a county society is evidence in itself of a desire on the part of a physician to affiliate himself with the most progressive elements in the profession. It is an indication to those who seek information about him that he has the best interests of his profession at heart; that he is desirous of maintaining his standing locally; that he sees the advantage of constant contact with his fellow practitioners; that he is in constant touch with the newest advances in medicine through attendance at meetings of his county society; and that he is contributing to the field of public relationship by being interested in an organization which is constantly at work to better the relationship between medicine, the public and the official branches of government.

Membership in many national medical societies is contingent on membership in county societies; medical defense (offered by the state association) lapses immediately on failure to pay dues on time; chances to present scientific papers are scarce unless county society membership is maintained. Many positions with insurance companies and industrial plants are open only to members of county medical societies. Indeed, many private patients moving to a new city immediately take steps to find out if the physician they are about to employ is a member of his county society. Credit associations often make similar inquiries before advising extension of credit; offices in desirable buildings are often leased to members of county societies.

It pays to join; it pays to keep in good standing; it never pays to drop out.

Among our many obligations to organized medicine is that of regular attendance at meetings. Without this, active participation in the affairs of the society is utterly impossible. While our average attendance at meetings is usually good it could be much better. Let me assure you that, regardless of any special interest each program will contain something of interest and benefit to each and every member.

Scientific Program

During the past year your program committee has made special effort to construct a program of such scientific interest and balance as to attract full attendance at each meeting. There has been a distinct improvement in the character of papers, case reports, clinical talks, and exhibition of patients and specimens. On occasions, those given the privilege of making clinical talks have read papers instead. May we suggest that in the future this space on the program be filled with real clinical talks, rather than the reading of formal papers.

*Presidential address before the Fulton County Medical Society, Atlanta, Georgia, January 3, 1929.

Another rule not strictly adhered to, is, that of furnishing the secretary with a copy of papers, case reports, etc., presented before the Society. If our transactions are to be made complete and interesting it is most essential that this rule be observed. I would suggest that as soon as our finances will permit, some means of publication of the scientific material presented before the Society be provided. This may be done by increasing the size of our bulletin, or by the purchase of sufficient space in our State Journal. Perhaps the latter would be more economical. The inauguration of this plan would serve two good purposes. First, an opportunity for editorial practice among our members, and second, it would stimulate more pride and care in the preparation of papers. We have entirely too many good papers and case reports presented before the Society that do not reach the medical press. May I suggest further that members presenting patients and specimens notify the secretary in advance of the meeting. At times our programs are so crowded that those members on the formal program are somewhat embarrassed by the practice of bringing before the Society patients and clinical specimens without advanced notice. This part of the program, however, is most important, and we hope that more patients and specimens will be presented in the future.

Importance and Function of Various Committees

Of the various standing committees in our Society, the Committee on Public Policy and Legislation, and the Committee on Public Health, ought to be most active this year. There will be introduced under the auspices of the State Association at the next session of the Legislature, a bill to be entitled "An Act to Establish a State Board of Examiners in the Basic Sciences underlying the practice of the healing art, to provide for its organization and powers, to provide that certification by such board be a prerequisite to eligibility for examination for license to practice the healing art and to repeal all laws and parts of laws in conflict with this Act." There is being initiated by the officers of our State Association, an organization campaign which we hope will insure the passage of this bill. Our local committee, therefore, should interest itself immediately in this campaign and arouse the interest of our entire membership to give their earnest cooperation to the State Association officers in their legislative program.

The importance of this measure cannot be emphasized too strongly. Numerous efforts by various state medical associations to eliminate irregular and incompetent practitioners, have been made in recent years but to no avail. The basic science law seems to solve this problem more satisfactorily than any legislative act heretofore adopted. In states where it has functioned for a few years the results have been most gratifying. It is our obligation therefore, to become actively and earnestly interested in all legislative measures which have for their aim the improvement and preservation of the health of our people. I might add further that the enactment of this bill would not conflict in any way with our present medical practice act and the function of our regular board of medical examiners, nor will its passage and function incur any expense to the state, and only a nominal expense to its applicants.

A second matter which should engage the attention of this committee is that of stimulating among our membership more interest in the legislative program of the State Board of Health. It has been my impression for some time, that as a unit of organized medicine, we have not displayed proper interest and co-operation in the health activities of our State and County Boards of Health. Among some of the more important measures which will be sought by the State Board of Health at the next session of the Legislature are:

First: A substantial increase in the appropriation for the Board proper, which covers the laboratory work, child hygiene, county health work, malaria control, water and sewerage control.

Second: An appropriation to enable the Board to help financially the weak counties in the state to establish the Ellis health law.

Third: A state subsidy to local county tuberculosis hospitals.

Fourth: A nurses' home at Alto, in addition to this institution's regular appropriation.

Fifth: A substantial building program for Gracewood, and

Sixth: To build a school for the feeble-minded in Atlanta or Fulton County, to be run as a state institution.

I repeat that the officers of the State Board of Health deserve more active co-operation in their work from the membership of this Society.

The third question which should receive consideration from this committee, is that of expert testimony on the part of physicians in the prosecution of criminals. The increasing number of instances where the courts have disregarded the testimony of physicians in prosecution of criminals and even in many civil cases which have a medical phase, seems to be a serious reflection upon the integrity and competency of our profession. Would it not be well for a representative group of men from the state medical and bar associations to discuss this matter, and if deemed advisable, draft a constitutional amendment creating a board of alienists whose opinions could be respected and from whose decisions there could be no appeal as to the sanity or insanity of criminals?

The committee on public health must also be charged with an increasing responsibility. The city health officers, together with the superintendent of schools, have been engaged during the past few years in an active health campaign, looking not only towards prevention of disease among the personnel of our public schools, but to carry through the students to every home in the city and county, health messages concerning preventive medicine. The plan urges also that every home have its family physician, emphatically pointing out the advantages of periodic health examinations.

Our city health department and superintendent of schools deserve great credit for their efforts concerning the health of our school children. This committee should interest itself in this campaign, endeavoring at all times to lend the very best influence and aid of our Society to those city officials who are charged with the responsibility of disease prevention in our schools, and the improvement of health conditions generally.

The rapid industrial development of the South, and especially this immediate community, and the marked advance in our educational institutions, should furnish the publicity committee a rich field for investigation and service. Among the very first questions asked by industrial corporations when seeking a location, is: what about the health of your community and your facilities for safe-guarding it? Would it not be well therefore for this committee, together with the public health committee, state and county health officers, to collect such data as would most favorably answer these questions and make it available for our industrial bureau and chamber of commerce? Practically every lay organization in our community is becoming more and more interested in disease prevention and the preservation of health. It should be the business of this committee, together with the public health committee, to have written by various members of our Society, health messages concerning all preventable diseases and other important health questions, which shall be available at all times to the various lay organizations in their respective health campaigns.

Time will not permit further discussion of the functions of our various committees. I would like to urge the Chairman of each committee to hold frequent meetings during the year for the purpose of initiating steps which look to the betterment of our Society and organized medicine generally.

The Physicians and Dentists Credit Bureau, which was organized in July of last year, has in spite of some rather serious handicaps in the beginning, made splendid progress. With the whole-hearted support of our membership for another six months its future success will be assured. To those members who have not joined the Bureau, I urge you to do so immediately.

To the Ladies Auxiliary I extend New Year's greetings, and wish for them every possible success in your undertakings during the year.

(Continued on age 89)

AN ANOMALY OF THE RECTUM*†

L. W. GROVE, M.D.,
Atlanta

Many abnormalities of the rectum and anus are not especially uncommon, but this type of anomaly appears to be exceedingly rare. The problems met with in an effort to restore function, are at times so difficult of accomplishment, that we deem it wise to report the following case. The technique employed is believed to be an improvement over the one most commonly used.

Case Report

R. W., white baby girl, age 7, was admitted to my service, Wesley Memorial Hospital, June 20, 1927, complaining of incontinence of feces. The condition had existed since birth. Physical examination showed an undernourished baby girl, with some evidence of dehydration. The abdomen was distended, tympanitic and tender. Irregular firm nodules could be felt throughout the entire outline, of what was thought to be the colon. It was later found that these nodules were small fecaliths distributed throughout the colon. Blood picture was negative except for a low grade secondary anemia. Urinalysis was negative except for the presence of indican.

Pre-operative treatment. The child was given a liquid diet with daily injections of four ounces of olive oil, given through the rectal opening on the posteria wall of the vagina. This was supplemented by saline enemas, given daily for five days. Her condition improved, and on June 26, 1927, a left-sided colostomy was done, through a left Mc. Burney incision. The bowel was opened forty-eight hours later with cautery.

At the time the colostomy was done, there was found a large fecalith which filled the rectum and lower sigmoid. Following the colostomy she was given enemas of olive oil, in an effort to soften the mass. Two weeks following the colostomy, the opening on the posterior vaginal wall was dilated, and the remainder of the fecalith was broken up and removed. The object of the colostomy was to put the rectum at rest making it possible to do the plastic operation in a comparatively clean field. This we were able to accomplish by keeping the distal opening of the colostomy packed with a small vaseline sponge. The colostomy functioned well, and on August 8, 1928, the plastic operation was done, by Dr. Grove.

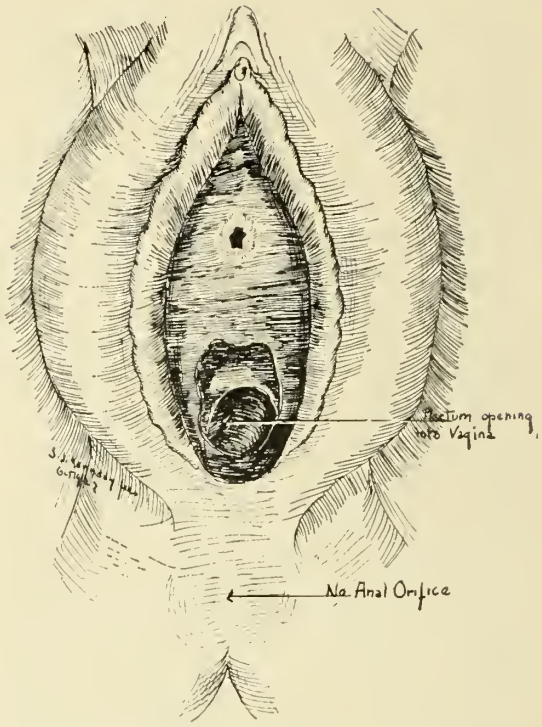


Figure I—Rectum opening on posterior vaginal wall, just within vestibule.

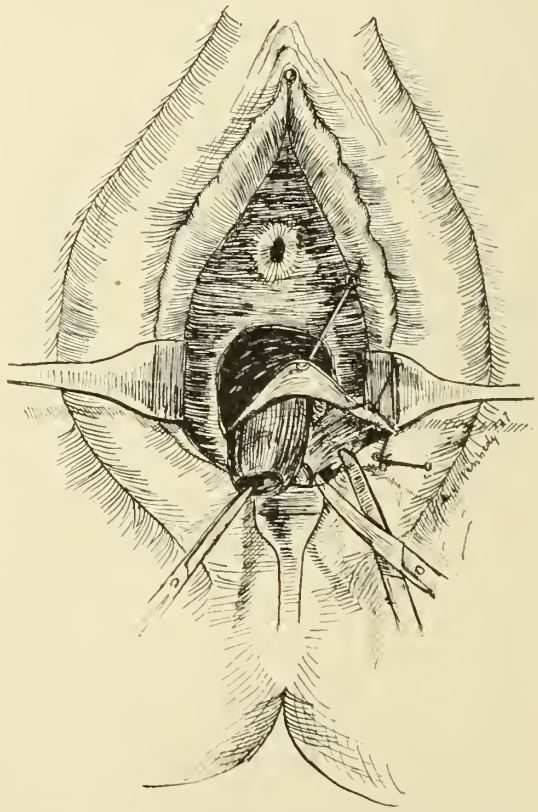


Figure II—Incision has been made through left side of vulva, to give room for dissection, and rectum is being freed from the vagina.

†From the surgical department of Emory University.
*Case report before the Wesley Memorial Hospital Staff meeting, Emory University, Ga., October, 1927.

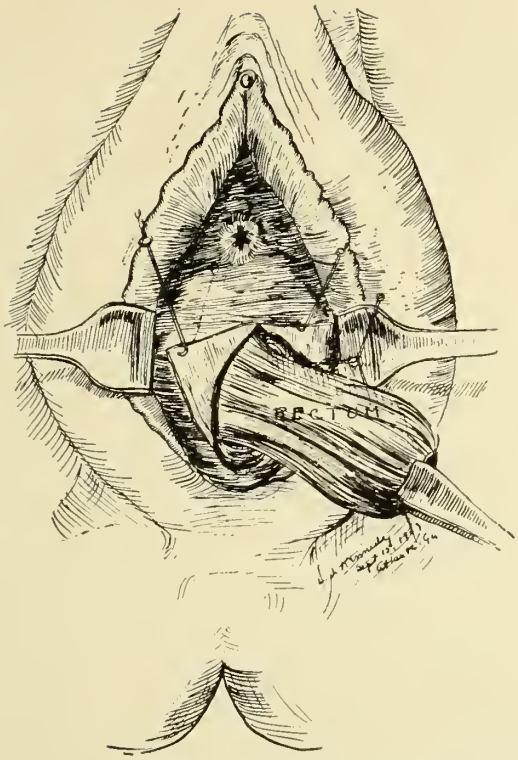


Figure III—Rectum has been thoroughly freed from the vagina, and is about to be transplanted into its normal position.

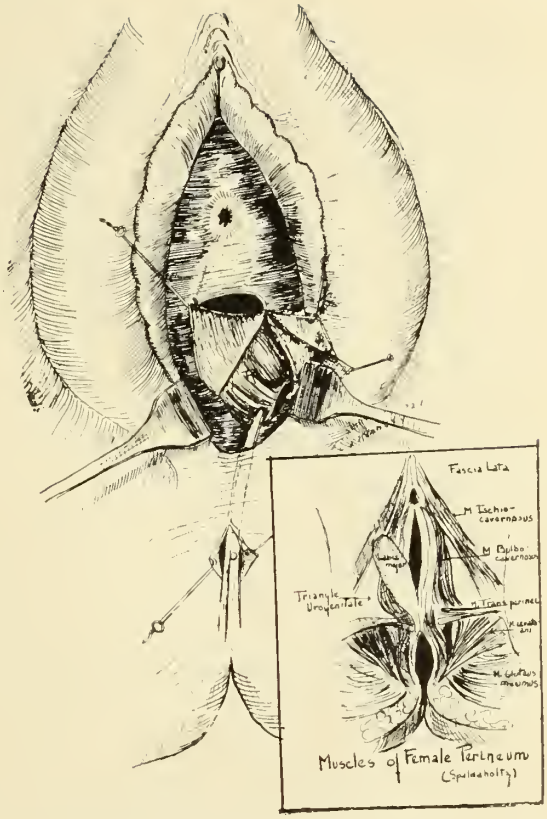


Figure IV—Incision has been made through skin and deep fascia sphincters identified and the perineal body tunneled by blount dissection through the sphincter and back of the levator ani. Rectum is about to be brought down into its normal position.

Operation—Under ether-anesthesia, the child was placed in the extreme lithotomy position, and a transverse incision was made in the left wall of the vagina and vulva. This we found to be necessary, in order to have sufficient room to mobilize the rectum through the vagina. With the exposure afforded by this incision, it was comparatively easy to free the rectum from the vaginal wall in front, and the perineal body behind. After the rectum had been thoroughly freed, an incision approximately 3 cms. long was made in the perineum at a point where there appeared to be a small dimple in the skin. We interpreted this as being the normal location of the anus. This incision included the skin and deep fascia. From this point in the deep fascia, with curved pair of blunt forceps, the perineal body was tunneled through into the vagina, going between what appeared to be the sphincter muscles and back of the levator ani. The rectum, which had been thoroughly freed, was then grasped and pulled through the tunnel made in the perineal body and sutured in its normal position, surrounded by the normal musculature of the perineum. The incision in the wall of the vagina and vulva was then repaired.

Subsequent note: November 10, 1928. Convalescence has been uneventful with very

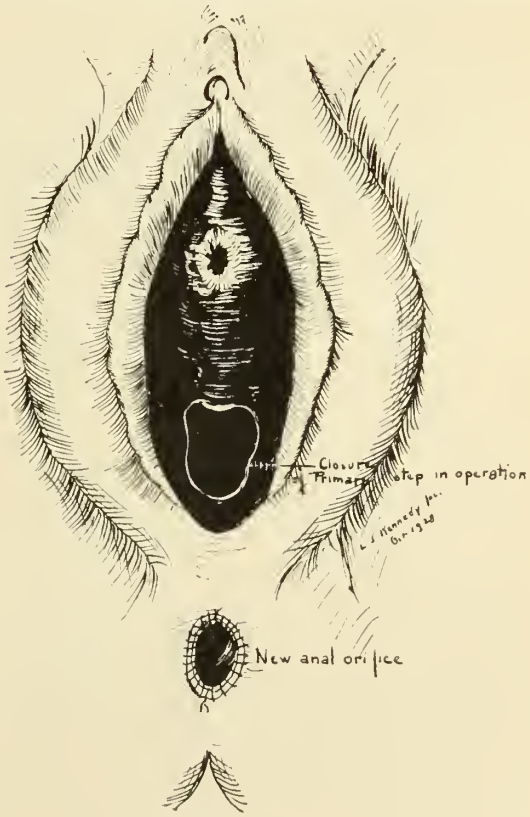


Figure V—Anus has been satured into its normal position, and incision in vagina and vulva repaired.

satisfactory functional results. Colostomy closed three weeks after rectum began to function. The child has gained in weight. She now has from one to two normal bowel movements daily, with excellent sphincter control.

Conclusions: An unusual anomaly of the rectum and anus, in a child seven years of age is reported. A two stage technique is offered as an improvement over the technique usually employed. With the use of a left-sided colostomy, the patient can be put in a better condition, and the plastic operation can be done in a comparatively clean field. With this technique neither the perineal body or sphincters are cut, hence, the normal muscular control is more nearly preserved, with less risk of suppuration, with probable loss of function. Functional results in the case reported are good. There is good control, with only the slightest soiling very occasionally. The child is now attending public school.

CHRONIC INDIGESTION*

An Analysis and Clasification of Its Etiological Factors

L. C. ALLEN, M.D.
Hoschton

Gentlemen: This subject includes a good deal of medicine, and in the time at my command I can only hope to give a brief outline of it. We shall discuss only the chronic form of indigestion.

The vast majority of the laity have very crude ideas concerning this subject, and are very well satisfied with the diagnosis when a doctor tells them that they have "indigestion." The profession no longer looks upon chronic indigestion as a disease entity, but the term serves a useful purpose as a caption under which we may discuss a large number of pathological conditions in which disturbance of the digestive function is a prominent symptom; it serves as a convenient "base," so to speak, from which we may explore and chart a large field rich in pathology of interest and importance.

Some few cases of stomach trouble do not lend themselves very well to classification. For instance I remember treating, several years ago, a country girl, 18 years old, physically perfect, who had complained of digestive trouble for some months, and who finally came down with nausea and vomiting, which persisted for weeks, despite all treatment. She vomited several times a day, lost flesh, and her condition became quite serious. Several consultants were called, different diagnoses made, and various plans of treatment tried, but nothing did her any good. Finally one day she threw up a hard, perfectly round ball, somewhat larger than a hickory nut, which was found to consist of hair. After that she made a rapid recovery. Now I would not know how to classify a case like that. Then again there are some cases of indigestion met with where the cause canot be determined. But aside from these few exceptions all cases of chronic indigestion may be divided, from an etiological standpoint, into four classes. Every case met with may be placed in one of the following four groups:

1. Functional.
2. Organic.
3. Reflex.
4. Constitutional, or systematic.

In order to enable me to readily remember these classes I employ the little word F-O-R-C-E (force). The first letter from the name of each class constitutes this word: f, functional; o, organic; r, reflex; c, constitutional; and e, exceptional.

Whenever a patient comes in complaining of "stomach trouble," or who has "indigestion" as an outstanding symptom, it is best to examine such patient in a systematic manner. If we make our examination in a haphazard, indefinite way, jumping about from one thing to another in our search for the cause of his illness we are almost certain to overlook, or miss, something of prime importance. My plan follows: skipping the first class, I begin with class second. I first try to find out if possible if the patient has any *organic disease* of the stomach itself. If no such disease is found, we proceed to look for causes that fall in class three, things that

*Read before the Ninth District Medical Society, Canton, Ga., March 21, 1928.

disturb digestion in a *reflex way*. If still the cause is undiscovered, we next look for *systematic* troubles (class 4). After exhausting these three classes, eliminating every possible cause that we can think of belonging in any of these groups, we feel then that we are justified in concluding that the case belongs in the *first* group, that the patient probably has functional indigestion.

Now let us briefly examine each class separately.

1. *Functional.* It is well known that the emotions have a profound effect upon the functions of the stomach. Fear, worry, anxiety, anger, sorrow, distress or any painful emotion, anything that perturbs and depresses the conscious mind, disturbs digestion. Even dumb brutes are also affected, often in a striking manner, by painful emotions. These animals will often refuse food when placed in an unfavorable, or in a strange environment. Trapped and confined birds pine, refuse food, and lose fat and flesh, and are much less desirable for culinary purposes than are birds shot on the wing. In our complex civilization thousands of things occur every day that profoundly affect the emotions of people. I know a lady who nearly went crazy when her son was drafted into the army, and the job was completed when she received a message stating that he had been killed in the battle of the Argonne. She literally grieved herself to death. Business reverses, domestic infelicity, a family scandal, trouble with the law, the loss of a loved one, are a few examples of the more common cause of painful emotions. It has been aptly said that what some patients need is, not a doctor, but a divorce; another needs a bank account, and so on. There are many despondent spirits, many sad hearts in the world that the world knows not of. Shakespeare expressed the idea cogently and clearly when he made McBeth ask his lady's physician:

> Cans't thou not minister to a mind diseased,
> Pluck from the memory a rooted sorrow,
> Raze out the written troubles of the brain
> And with some sweet, oblivious antidate
> Cleanse the stuff'd bosom of that perilous stuff
> Which weighs upon the brain?

And Oliver Goldsmith, himself a physician, expressed the same thought beautifully in his essay 'The Last Rose of Summer," asking, and affirmatively answering the question, "Can a person die of a broken heart?" Many people are so constituted, either from heredity, or improper bringing up, or both, that they have not the ability, courage, or nervous stamina, to stand up and face the adversities of life and remain normal. Stigmatized with the curse of constitutional inferiority, they cannot bear the carks and cares, the jolts and jars, of every day life without experiencing adverse functional disturbances of mind and body.

Before leaving the subject of functional indigestion I would like to throw out two cautions: The first is that the nervous case, the neurotic, the hypochondriac, or the hysterical patient should not be dismissed too inconsiderately. In many such cases the prognosis is just as grave as it is in a tubercular infection of the lungs, or a cancer of the stomach. The second caution is that we should always remember, *and never forget*, that the neurotic or hysterical patient may have also an important organic disease. This type of patient is as subject to organic disease as is any other class of people. The more carefully we examine our patients the fewer cases of pure neurosis do we find. But regarding neurotics, we should keep a charitable frame of mind. Many of them, most of them, I guess, have not had a fair chance in life. Born with a weak, asthenic constitution, brought up on a defective diet, suffered from rickets during childhood: if wealthy, pampered and petted when they needed discipline; if poor, scolded and punished when they needed wise and kind guidance, reaching maturity with fixed physical handicaps and a distorted mentality, they present a difficult, often an impossible problem to the physician.

2. *Organic.* The second class of cases of dyspepsia, those due to organic disease of the stomach itself, have tremendous importance, but fortunately, are few in number. There are only three diseases of the stomach of particular interest: ulcer, cancer and gastritis. The latter term, which means

inflammation of the gastric mucosa, is often used erroneously as if it were synonymous with dispepsia. It is not met with in my practice now as often as it was in pre-Volstead days, but a form of it is yet seen quite often in cases of pellagra.

3. *Reflex.* The third class of factors, those that cause digestive disturbance in a reflex way, have received much attention. They have, in fact, almost monopolized the field, because they are the most spectacular, and because the surgeons are much interested in this class of cases. In this group are included chronic appendicitis, gallstones, chronic cholecystitis, cancer of the colon, or other part of the alimentary canal outside the stomach, mucous colitis, intestinal stasis, hemorrhoids, pancreatitis, cysts or cancer or other neoplasms of pancrea, cancer of the liver, pregnancy, prostatic disease, disease of the pelvic organs in women, bands or adhesions which interfere with the normal movements or functioning of any part of the alimentary tube, and a number of less common causes. I would like to say here that in my opinion the diagnosis of chronic appendicitis is made much too often, and that the diagnosis of cholecystitis is not made as often as it should be. Infection of the gall bladder is a common condition, a prolific source of digestive disturbance, and is too often overlooked.

4. *Systemic.* The fourth class of dyspepsia cases, those due to systemic diseases, include a large number and variety of diseases. We have time only to enumerate the most common and important: pellagra, tuberculosis, organic disease of the nervous systems, blood diseases, kidney diseases ,infections (including focal infections: teeth, tonsils, appendix, gall-bladder, cervix, tubes, etc.), syphilis, chronic malaria, diseases of the heart (ch. decompensation), arteriosclerosis, gouty diathesis, chlorosis, and a great many less common causes. Four Outstanding symptoms: now just as there are four classes of causitive factors, there are also four outstanding symptoms. They are:

1. Pain.
2. Vomiting.
3. Hemorrhage.
4. Loss of weight.

(1) *Pain.* We must pin down the patient carefully regarding this pain. Indefiniteness here has no value. Just where, precisely, is the pain located? Where does it radiate? Is the pain constant or intermittent? If intermittent, how often is it experienced? and how long does it continue when it comes on? Is it a real *pain,* or just a discomfort, or heavy, full feeling in the epigastrium? Does eating help it, make it worse, or have no effect upon it? In other words we want to find out, if possible, the cause of the pain. Is it due to gall-stones, chronic appendicitis, renal calculi, peptic ulcer, stomach cancer, tabes dorsalis, membranous colitis, fecal impaction, angina pectoris, or abdominalis, infectious cholecystitis, lumbo-abdominal neuraligia, post-operative adhesions or some other cause. Possibly it is a pressure pain, due to aneurism, some neoplasm or abscess. Murray enumerates 35 different kinds of abdominal pain, due to innumerable causes.

(2) *Vomiting.* The cause may be trivial, or exceedingly grave. Vomiting is a symptom that always demands careful investigation. The most common causes are: pregnancy, hysteria, cancer of stomach, peptic ulcer, pyloric stenosis, Bright's disease, tuberculosis, cirrhosis of liver, brain tumor or abscess, diabetes, chronic myocarditis, migrain, gall-bladder diseases (including stones), malignancies of liver or pancreas. Barton and Yater enumerate 115 causes of nausea.

(3) *Hemorrhage.* Hematemesis is a grave omen. It may be due to ulcer of stomach or duodenum, cancer of stomach, cirrhosis of liver, chronic gastritis, passive congestion of portal circulation from any cause, erosion, ulcer or cancer of esophgus, anemia in girls, myeloid leukemia, cancer of liver or pancreas, gall-stones ulcerating into duodenum, cardiac decompensation, and other less common pathological conditions.

(4) *Loss of Weight.* Always inquire about it. Patient may not think to mention it. It may be due to some insignificant cause, some foolish food phobia, but it more often means a serious diagnosis. If the loss

of weight has been considerable within a comparatively short period of time, there are four things to think of. The first thing that will enter our mind is tuberculosis; the second is the possibility of a malignancy somewhere in the body; the third is diabetes, and the fourth is hyperthyroidism. These are by no means the only causes of the loss of weight, but are perhaps the most common and most important. Anything that interferes with appetite and digestion brings about loss of weight.

Four Methods of Examination. In cases of dypepsia there are four ways to examine the patient: (1) The history. This includes the family history, personal history and clinical history of present illness; (2) Physical examination. In this give particular attention to the five vital organs: stomach, liver, lungs, kidneys, heart; (3) gastric analysis; (4) X-ray.

It goes without saying that the first two methods mentioned are absolutely essential in all cases. Gastric analysis has played a large role in the past, and I would like to disabuse your minds of any exaggerated idea of its value, if you entertain any such idea. Time was not so very long ago when the so-called stomach specialist gave a test meal, one hour later passed a stomach tube, withdrew the contents of the stomach, analyzed it, and based his diagnosis wholely and entirely on what this analysis showed. We had a whole literature built up around gastric analysis. We often sat for hours listening on talks on hypochlorhydria and acid percentages, most of which was nonsense. Gastric analysis has been criticized in the first place because it gives the acid content of the gastric juice at *just one moment of time.* An half hour earlier, or an half hour later this percentage might be different. To overcome this objection a method known as "fractional analysis" was devised. This consists in giving the usual test meal, then only after 15 minute passing the tube, withdrawing a small sample of the gastric juice, and analyzing it; then after another 15 minutes withdrawing another sample and analyzing it. This is repeated every 15 minutes until the stomach is empty, which usually requires about an hour and a half. Now you have five or six analyses, and the question arises which set of figures is correct? Nobody knows. Another objection urged against gastric analysis is that we have no reliable standard to go by. The per cent of acid in the gastric juice of well people varies greatly, and in order to know whether a certain specimen is abnormal we should certainly have to know just what that particular individual's gastric juice contained in health—an obvious impossibility. Some investigators in Chicago made gastric analyses on 500 supposedly healthy young men, students in the University of Chicago, and the results showed quite as much variation from supposed standards as is found in sick people. Still another drawback to gastric analyses is the fact, repeatedly demonstrated, that you can *get different percentages of acid from different parts of the same stomach at the same time.* A recent discovery has been made (by Pavlow, I believe), which has given the advocates of gastric analyses a rather hard jolt. He found that the peptic glands respond in a different manner to different kinds of food. For instance more pepsin is secreted when fish is eaten than is the case when other kinds of meat are ingested. Alvores, a distinguished gastro-enterologist of California, says that considering the confusion into which the subject of gastric analysis has fallen he has abandoned the tube altogether. Still I am of the opinion that in some few cases, as in achylia, or extreme acid conditions, the method may occasionaly give us information of some little value in our efforts to arrive at a diagnosis.

The X-Ray. In regard to the x-ray just a word. It is universally recognized today as an invaluable help in making a diagnosis. But remember I said "help." It is not the "whole cheese." An x-ray machine cannot supplant brains; it cannot be substituted for a carefully taken history, or a physical examination. Many laymen, unfortunately, think it can do all these things. These come to the radiologist, ask for a picture, honestly believing that it is all that is necessary to make a full, complete, positive, certain,

(Continued on age 89)

URINARY ANTISEPTICS*

MONTAGUE L. BOYD, M. D.†
Atlanta

It is not an unusual experience for me to meet a physician who is very poorly informed about the use of urinary antiseptics. This is not at all surprising in view of the fact that there is so much difference of opinion among urologists concerning urinary antiseptics. What I purpose to do here is to present some of the ideas which I have developed as the result of my experience with urinary antiseptics, hoping to make evident some of the things which should be understood by those who treat urinary infections.

One of the commonest errors which is made in treating urinary infections with urinary antiseptics is the disregard of the causes for the production and continuation of the infection. In many instances it is impossible to cure a urinary infection by simply administering urinary antiseptics, though by their use it is often possible to ameliorate the severity of the inflammation and bring about a condition from which the patient experiences very few evident symptoms. To cure permanently most urinary infections mechanical treatment of certain urinary tract changes is necessary.

In practically all urinary infections two etiological factors must exist: (1) Some infection somewhere in the body from which organisms can be passed to the urinary tract, and, (2) pathological or anatomical changes in the tract itself.

The most common organism found in urinary infections is the colon bacillus and naturally the most common lesions from which the organisms come are colitis, appendicitis, and other diseases of the intestinal tract or of the gall bladder. Of course tonsillitis, acute skin infections, and some of the acute respiratory infections are the sources from which organisms are occasionally passed to the urinary tract.

As you know, it is difficult to infect a normal urinary tract, but rather easy to infect a urinary tract in which there are changes which permit the development of infections. Where there is a change in the mucosa produced by a general intoxication of the tissues of the body (in which the mucosa shares) and also by the passage of toxins from the body through the kidneys by way of the urine, it is easy for pyelitis and cystitis to develop when bacteria gain entrance to the urinary tract. Such changes in the mucosa of the urinary tract are frequently found in many of the acute infections in other parts of the body, e. g., acute tonsillitis, colitis, acute appendicitis, coli-cystitis, etc., from which it is not uncommon, as I have just explained, for bacteria to enter the blood and be passed to the kidneys and then to the urinary tract. These inflammations and accompanying infections of the urinary tract mucosa are usually, of course, transient and pass away when the cause for their existence disappears, unless the infection has produced a sufficient amount of damage to the mucosa to prevent the infection being overcome by the tissues.

Still further, when the mucosa is damaged by irritation from stones or foreign bodies or as the result of urinary obstruction somewhere in the urinary tract infection readily occurs and is resistant to treatment by urinary antiseptics unless the cause for the changes in the mucosa is relieved. If, however, a very marked change in the mucosa (sub-mucosa and the deep layers) has resulted from an obstruction to urination, or the presence of a stone, and this is made worse by the infection, then the infection is very apt to persist in spite of the removal of the obstruction or the source of irritation (such as calculus) and also treatment with urinary antiseptics. The more marked "back pressure" change in the urinary tract are not limited to the mucosa, as for example in trabeculation and sacculation of the bladder, hydronephrosis, etc., nor is the inflammatory reaction, the result of urinary tract infection, limited to the mucosa: e. g., it may extend entirely through the bladder wall and signs of it can be seen in suprapubic operations on the bladder where perivesical inflammatory adhesions are found. And treatment for a long time is necessary to permit the mucosa to

*Read before the Medical Association of Georgia, Savannah, Georgia, May 10, 1928.
†Chief, Department of Urology, Emory University.

return to normal sufficiently to throw off the infection.

There are only three urinary antiseptics which I am now in the habit of employing—urotropin, methylene blue, and Caprokol. My experience with the others has been disappointing and I do not consider that any of them are worth administering except under very unusual circumstances. Where infections have developed in or extended into the kidney substance it is occasionally of advantage to employ intravenous injections of mercurochrome and gentian violet, but I think that it has been conclusively shown that acriflavine and mercurochrome when given by mouth are of no value in such cases nor are they of advantage in treating chronic urinary infections existing in the renal pelvis and in the bladder. In spite of the work which has been done on urinary antiseptics, and the information on the subject which is available in such text books as Keyes, Eisendrath, Young, Lowsley, Chetwood, etc., still I see patients who are being given acriflavine by mouth or some other useless drug; useless at least under the condition in which they have been prescribed.

Monobasic Acid Sodium Phosphate, Ammonium Chloride, and Sodium Bicarbonate

It is a fact that where an infection has not established a strong foothold in the urinary tract, and the causes for the production of the infection have been eliminated, it is often possible to cause it to disappear by doing nothing other than rendering the urine acid. Also, whenever it is necessary to administer urinary antiseptics it is at times essential, and usually desirable, to have the urine acid, so that the best results may be obtained. Urotropin is practically useless when urine is alkaline; methylene blue and Caprokol, however, seem to be actively beneficial in alkaline urine though in my experience less active when the urine is strongly alkaline. Monobasic acid sodium phosphate in doses of from 15 to 60 grains three times a day and ammonium chloride in doses of from 5 to 20 grains three times a day are useful at times for acidifying the urine.

Monobasic acid sodium phosphate is useful also in patients with alkaline urinary infections who have chronic constipation for it has some laxative effect. But on the other hand it may produce so much looseness of the bowels, in doses which are sufficient to acidify the urine, that its use has to be limited or discontinued. Ammonium chloride is often very effective for acidifying the urine, but it has a tendency in many patients to produce a gastro-intestinal disturbance, and in many cases I have not been able to employ it on account of its accentuating the nausea which the patient already has. In five grain doses, which can nearly always be borne, it sometimes is effective, but in most cases it requires ten, fifteen, or twenty grains three times a day to change the reaction of the urine. Occasionally I have found cases where it was not possible to render the urine acid by the largest tolerated doses of these drugs.

Leonard[1] has shown that the administration of sodium bicarbonate interferes materially with the action of the urinary antiseptics because it changes the surface tension of the urine some other alkali should be employed if one is indicated for a patient taking a urinary antiseptic.

Methylene Blue

Methylene blue is really very useful in many infections of the urinary tract, particularly those where there is some irritation of the bladder, or where the urine is alkaline. If it is difficult to administer monobasic acid sodium phosphate or ammonium chloride methylene blue is particularly helpful. Of course there are many patients with impaired kidney functions by whom methylene blue is not secreted in the urine in sufficient concentration to permit its being of any value, and there are some instances in which it is secreted as a colorless chromagen and on that account seems ineffective. Two grain doses of methylene blue given three times a day after meals is usually sufficient and that amount rarely, if ever, produces gastro-intestinal disturbances. Its use is a little inconvenient at times, perhaps, because the urine stains everything with which it comes in contact, and many patients object to it on that account. In some cases it does not seem to act with sufficient antiseptic power, and I frequently reinforce its action by the administration of urotropin or caprokol. I can see

no objection to such a practice, and in some instances I have felt sure that the patients have been greatly benefited by giving the additional drug.

Caprokol

One of the biggest objections which I have found to the administration of Caprikol is that it tends to upset the gastro-intestinal tract. In most cases I have found it possible to give urotropin or methylene blue and with them obtain the results which are expected. Occasionally, however, methylene blue is not desirable, because of the necessity of performing the renal functional tests with phenolsulphonephthalein or indigo carmine and urotropin is for some reason not effective. In such cases caprokol is definitely indicated, and, if the patient can stand the large size dose which it is necessary to administer, good results can often be obtained. In many such cases, however, there is already a quite marked gastro-intestinal disturbance which is made worse by caprokol. Many patients find it almost impossible to swallow the large capsules without increasing their nausea, and for several years I have been giving the "caprokol in oil." When given in that way, in doses of four to six teaspoonsful, I have found that it produces less gastro-intestinal disturbance and it has sometimes acted as an effective urinary antiseptic. But certainly not always as effective as has been claimed by its manufacturers.

The nausea which so frequently follows operations on the kidneys or bladder usually preclude the use of caprokol at a time when a urinary antiseptic is often urgently needed. In such cases urotropin and methylene blue can usually be employed, though at times vomiting makes it useless to give them by mouth.

Urotropin

Urotropin is the simplest of all the urinary antiseptics to administer. This fact and its low cost make it very popular. If intelligently given it is often quite satisfactory and the results obtained in lower genito-urinary infections are as great as could be expected from the use of any of the now existing urinary antiseptics. It is hardly likely that it is of much value in treating upper urinary tract infections, so that methylene blue and caprokol are to be preferred in those cases.

In some cases a very marked irritation results from the administration of urotropin, as can be discovered by blood cells in the urine and a marked increased frequency to urination, etc. In these cases an examination of the urine shows a large number of epithelial and red blood cells, and always (in my cases) a continuation of the pus and bacteria, though they both may have been reduced in quantity. If the urine is extremely acid and quite concentrated it is not unlikely that a cystitis will occur with the administration of urotropin, but it rarely appears when the urine is either dilute or not markedly acid. There is, however, a definite susceptibility of some patients to urotropin. Some of them cannot even take five grains twice a day without an irritation of the bladder. In these cases if a urinary antiseptic is indicated it is naturally necessary to give some other drug.

Ten grains of urotropin three times a day is in my experience often sufficient, though Hinman and others have decided that fifteen grains is a minimum effective dose. As I have just said, the effectiveness and intensity of the action of the drug depend to a great extent upon the construction of the urine and its acidity, and the size of the dose is often best regulated according to these factors. If the urine is alkaline it should be made acid if possible with monobasic acid sodium phosphate or ammonium chloride and all drugs which render the urine alkaline should be avoided.

SUMMARY

It seems advisable to call the attention of the profession to some points which are fairly satisfactorily agreed upon concerning the use of urinary antiseptics in urinary infections. Urotropin is still accepted as a fairly satisfactory urinary antiseptic when employed for the purpose for which urinary antiseptics are supposed to be used, namely: to control urinary infections and prevent their exacerbation while, and until, the causes for the production and continuation of the urinary infections are removed. The employment of urinary antiseptics for the cure of urinary infections without considering the other things involved is not approved by those who are well informed. Methylene blue is often a very satisfactory urinary antiseptic and is useful in alkaline urine instead

of urotropin when it is not possible to use monobasic acid sodium phosphate and ammonium chloride satisfactorily. Caprokol is very effective in some cases. But there are a good many instances in which it is ineffective, and certainly its employment is not warranted where it produces an increased gastro-intestinal disturbance nor where it cannot be given in sufficient size doses (as indicated by its manufacturers) to be effective, nor where the difficulty and expense of its administration are not warranted by the therapeutic result obtained.

REFERENCE

(1) L. Leonard and A. Wood, Journal A. M. A., Dec. 12, 1925, Vol. 85, pp. 1855-9.

DISCUSSION ON PAPER OF DR. BOYD

Dr. W. F. Reavis, Waycross: After listening to Dr. Boyd's very excellent paper, if you fully grasped the contents of the paper and his remarks, I think you will agree that he should change the title to read "A Warning in the Use of Urinary Antiseptics in Pyuria." I feel the same as the doctor said a few moments ago about the woman who had been examined by ten physicians and told to let the growth alone as long as it left her alone. So many patients are being treated at present, not only in our section but in others, for pyuria, for an indefinite period of time, with antiseptics. There are so many ways of having a contaminated urine, in which we find pus cells, and after a careful study of the case we are absolutely in the dark as to whether it is a real urinary infection or a contamination. How many patients are examined in Georgia today who are asked to bring in a specimen of urine? Many of them are women and most of them have a discharge from the vagina, and in examining the urine pus is found in most of the specimens for most of them are contaminated. If you do not determine the source of the infection first you are doing the patient an injustice, and if you have a real pyuria of the urinary tract and treat it for a long time with urinary antiseptics you are back at the same place as the woman with the lump in her breast. Unless the cause is removed you will not accomplish much by the antiseptics that you may use, by mouth or otherwise.

A man will void his urine and you find pus in the specimen and tell him you will write a prescription that will relieve him. What happens? That man is sent away from your office with an obstruction that will grow worse as time goes on. Possibly if a careful examination was made of the patient at that time the cause could be removed so that he could get back to normal function of the parts. He would not lose a certain element of his vitality.

In cases of kidney stone there is almost always a continuous pyuria. Some stones remain dormant for a long time, and in most of these cases there is a continuous pyuria and the mere fact that you treat them for a long time with urinary antiseptics, in an attempt to prevent or cure an infection, does not benefit the patients for they have not had a careful examination to determine the cause of the infection.

Dr. Frank K. Boland, Atlanta: In discussing Dr. Boyd's paper I do not think it is out of order for me to mention a small point, and that is the financial waste in prescribing the drugs under their proprietary name rather than under their non-proprietary name. I have in mind particularly in this connection urotropin. If we write a prescription for it under that name it costs the patient about sixty cents an ounce. If we write the prescription for hexamethylenamin it costs much less. I have a slip from the Journal of the American Medical Association calling attention to this fact. If we prescribe under the proprietary names it costs the patients a great deal more than if we write the scientific name, so let us remember to write the proper name instead of the proprietary.

Dr. J. P. Bowdoin, Adairsville: I think Dr. Boland has brought out a very important point, and I hope the time will come when every doctor in Georgia will write his prescriptions under the proper names of the things he prescribes, using only such remedies as are recognized by our medical authorities and have been passed upon by the Council of the American Medical Association. If he does not know what the remedy contains, he should not prescribe it.

Dr. Cleveland W. Findley, Vidalia: When I was in school I learned that "Urotropin" was the foreign trade name for hexamethylenamin and "formin" the American trade name. Using either name simplifies prescription writing for some, but if foreign trade name is used the expense to consumer will be greater; if American trade name "formin" is used the expense will be the same as if chemical name is given.

Dr. H. Y. Righton, Savannah: I wish to more or less emphasize a few points in Dr. Boyd's paper. The paper asks "for what pur-

pose are urinary antiseptics employed?" My observation has been that they are employed to correct pyuria, regardless of what the primary condition may be. I find that these patients are fed upon such drugs over a period of many months, without an effort being made to ascertain the cause of the trouble.

In my experience infection of the urinary tract is never primary, other than that of the urethra. Unless you determine the cause, urinary antiseptics will not effect a cure. They have a decided effect in preventing infection. I think they should be employed in every case in which instrumentation is to be used, and in every case following catheterization. There is none that compares favorably with the hexamethylenamin group. I employ them in a dosage of from 45 to 90 grains daily. We must use caution in using them in some conditions, for sometimes they cannot be used without increasing the irritation or aggravating the condition. I think when there is a tendency toward alkalin media acid sodium phosphate has been very useful. I think another very useful drug which may be combined with hexamethylenamin is salol, particularly when the infection of the urinary tract is believed to be from the gastrointestinal tract. Hexylresorcinol is a drug that I have used considerably, but I do not know that it has any value over those of the hexamethylenamin group. Leonard contends that it should be used in large doses. He claims that the surface tension is not reduced by the small doses. It is a drug that patients will tire of, for two reasons. The first thing is that it is unpalatable, and the second is that it hits the pocketbook pretty hard. It will cost a patient $28.00 a month prescribed as Dr. Leonard recommends.

Dr. Earl Floyd, Atlanta: I do not suppose there is one present who has not enjoyed this very interesting and instructive paper. Urinary antiseptics are widely used and abused by many of us. My impression from this paper is that we should not expect too much from the use of drugs. It is only after we understand the manner in which the drug acts, and bearing in mind its limitations, that we can use it to advantage.

There is no doubt but that hexylresorcinol is a very valuable antiseptic. The years of experimental work and the scientific clinical observations which preceded its release to the medical profession insured this result. The fact that it lowers the surface tension of its solutions makes it naturally possess advantages, and as has been stated by Dr. Boyd, therein lies its effectiveness. However, I think all of you will agree, it has its limitations, and if used for all the conditions for which it is recommended, like other drugs, will lose its reputation, if indeed, it has not already.

There is one drug he mentioned that is cheap and for a long time has been in wide use for the treatment of infections in the urinary tract. That is hexamethylenamine. It has been used and abused probably as much as any other drug. I believe though it is still a useful drug but has to be used with certain precautions. I never use it where the kidneys are in an unstable condition, as after relieving an acute retention for example, nor do I use it where there is an excess of nonprotein nitrogen in the blood, or where the output is low. When a patient comes in with a high residual urine, high nonprotein nitrogen in the blood and a low dye output, his greatest danger is of course following catheterization. The kidneys become unbalanced and have to make a very difficult readjustment. It is while this is going on that we should be exceedingly careful not to add to their burden in any way, and until the kidneys are well stabilized, I believe that diuretics and alkalies are much more useful than urotropin. In impending uremia with acidosis, diacetic acid and acetone in the urine we all know that alkalies offer the greatest benefit.

My impression of the practical utility of this drug is as follows:

1. It requires time to have its antiseptic effect, hence it is of no value in urethral diseases.

2. It requires concentration, hence its value is diminished by diuresis (as Dr. Boyd stated), and it has no value in polyuric conditions or when the renal function is so gravely impaired that concentration is impossible.

3. It does not penetrate, hence it is of no value in any parenchymatous condition, unless it is used with hexylresorcinol.

4. It is perhaps useful as a preventive of infection by passage of urethral or ureteral instruments.

5. It is the ideal remedy to check a beginning pyelitis especially if it be a cocci infection.

6. It is particularly efficacious at the beginning of the pyelitis of pregnancy even when this is due to a bacillus, because the slight retention keeps the drug in contact with the bacteria.

7. It is equally ideal as a purifier of the tabetic bladder and for the same reasons.

8. It is much less successful in the control of bladder infections due to the enlarged prostate (perhaps because the seat of the infection is so deep in the prostatic gland or else

(Continued on Page 84)

MALARIA*

J. W. CHAMBLISS, M. D.

Americus

Malaria is a monotonous, recurring disease that carries with a most peculiar sting, in that the malaria parasite may lay dormant or be active in the human system for months and even years, just awaiting an opportunity to craze us with a chill.

We physicians have text books, modern teaching and daily experience with the cause, symptoms and treatment of malaria, so ,it is not the purpose of my paper to attempt to touch on these subjects as it will on other points of interest to us.

In acute malaria, now, do we as physicians treat our patient long enough to know that they are free from malaria?

Do we offer that amount of protection or advice in preventing a recurrence of the disease?

Have we treated this disease as serious as its damaging effect upon the human race, especially the South, would warrant us?

For instance, after acute malaria as a minimum, one is made sick one week. Of those made sick 450 died in Georgia last year, yet only one person in 400 that was sick died, which means, 180,000 people in this state were sick one week from malaria. A loss of 375 years for a person, or three and three-fourths years for 100 persons and to this we can safely add that of the 450 that died a hundred people were demoralized one day for each death and care of the person, which is equal to 45,000 people losing a day.

Three hundred and seventy-five people that could not work a bit. 45,000 spent their time sitting up with and burying the dead. Is this time lost worthy of consideration as being a causative factor in hindering progress in any state and community, any business or in any walk of life, to say nothing of the expense incurred, such as doctors' bills, nursing, drug bills, etc.

We may allow for mistakes in figures and still it would seem that there is a sense of duty imposed upon the physician and certainly a great field to do work for the good of his community, especially as a leader.

We know malaria is very dangerous and our duty does not end when we have cured a patient, if the disease is a preventable one and we know the prevention and grant our patient is ignorant of it. Still all admit that malaria is preventable.

There is a reason for most things. Then why should we be concerned in preventing malaria other than to prevent human suffering? There are many people in our midst affected with malaria that neither go to bed nor do they have a chill, but they become lazy, non-progressive, lacking in pep and energy.

The rich, the capable and energetic person seeks healthier homes, leaving an unproportional residue of poor and wretched in our midst.

Malaria is a rural, not a city, problem. Our most fertile agricultural fields are especially adapted to malaria and it is true that more malaria has been prevented by cleaning and ditching for agricultural purposes than has been prevented by health authorities. So, if agricultural interest here lags and our ditches grow up and fail to drain the man on the farm and his labor are made sick. Agricultural interest, which is the backbone of our community, fails to be profitable. A blow to any community.

Let's refer to history and see what has happened. In one of the Old Countries there was a time when all were very prosperous. Not only necessities were plentiful but ornaments, bronze statues, unheard of architectural structures were builded as evidence of the great progress made; then gradually the people began leaving for healthier places. There was no progress being made and only a few acclimated inhabitants left with not sufficient energy to even care for these beautiful structures. So today that country is in ruins.

Of all reasons given for the fall of this country the most logical one was the importation of the malarial mosquito from India. Along about this time a great army invaded this country and caught the people unaware, as they were more numerous and better equipped to fight than the inhabitants. So

*Read before the Second District Medical Society at Edison, Georgia, Spring meeting, 1927.

a wise general said even though at that time the cause of malaria was not known, "that if they could entertain or keep in check this army that the bad water and atmosphere would help them conquer their enemy." So after a short while the army perished; they died faster than the equipment at that time could have destroyed them in war.

The French attempted to build the Panama Canal, but instead of building the canal they left 50,000 tombstones and a mountain of abandoned machinery. Later the immortal Gorgas of the United States whipped malaria and yellow fever and dug the ditch.

What did he do first? He whipped malaria. Then it was possible to accomplish the work.

Exertion favors relapses in chronic malaria or the malarial parasite. We can not be active and progressive. Show to me a town backed by agricultural interest in a malarial district that is flourishing. They may even fall in ruins.

Agricultural interest is the backbone of our section. The farmer is more prone to have malaria than is the city man. The disease attacks him at harvest time, when he is most needed. The disease attacks the young more frequently than the old, so that childhood may be one long sickness and adequate education impossible.

It does not matter what we say about malaria, but what does count are the records kept at Washington, Atlanta and other centers where those seeking to invest would be most likely to inquire. When their investigation reveals that there were 450 deaths; 180,000 people sick with malaria in Georgia last year, we are met with facts and figures that we can not dispute.

Let's take for example, Syrians and Greeks coming into our midst. As a rule they are law abiding, progressive, satisfied citizens. But they seek employment whereby they are protected with screens, electric fans and practically none of them are farmers. Let a farmer move into our midst from a non-malarial section and it will be the talk of his community of his energy and ability to produce. Yet when he has farmed for a while, watch him, unless he becomes acclimated earlier than the average, he becomes infected with malaria, either chronic or acute and falls in line with his neighbor who is less productive and thus becomes a dissatisfied citizen and may speak of the bad water and atmosphere or he is home sick.

What great line of business is suffering in our state most? Agriculture. What class of people suffer most from malaria? The farmer. Suppose that we divide for comparison all classes of business in our state and allow a given amount of labor to each line of business, to make it profitable. Tie up an equal proportion of this labor with sickness and death as is the case and to this give the boss or the head malaria and you will see exactly what is happening in many instances right here before our eyes.

The insurance companies are in the North. They insure the South and the business is so hazardous that premium rates are so high that now the insurance companies have mortgages on a large majority of the homes and farm lands here; yet once these homes and farm lands were paid for.

It is quite possible that I have failed to furnish sufficient evidence to convince you, but let me say that there is sufficient evidence and proof to convince the most skeptical if studied; that from the standpoint of suffering humanity, financial loss and our lack of developing our natural resources in the South, where we have ideal climate and rainfall and many of God's blessings, we must wake up and stop this great drain on our people and make them more efficient in their respective lines of endeavor. So what are we going to do? There is nothing new about the proposition, except the actual doing. Doing is new. The malarial parasite has long been discovered. The mode of infection is agreed on. The treatment is even known to the average layman. Drainage has been profitable even not considering the great question of eliminating the mosquito. The public is demanding the eradication of malaria. It's going to be done. Therefore, what concerns us most is, will we be benefited or will we sit idle waiting for our children to eradicate malaria. We are trying to educate them and it is reasonable to expect of them, where a thing is as possible and comparatively as easy as it is to

eradicate this disease that they are going to accomplish this undertaking. Investors and capitalists will still be waiting for the removal of this great obstacle before they invest here.

A diagnosis of malaria gets the doctor out of quite a few tight places. It's easy to say malaria and many times we are justified in saying this, because malaria gives rise to so many symptoms and the treatment of malaria is to be considered in connection with so many other diseases. There is no work that I know of in which any more gratifying results are seen and the efforts are realized so quickly and that is of so much importance to all of us as a fight against malaria.

To drain all unused waters that do not flow swiftly and that are drainable.

Oil or stock the waters with the pot gutted minnow, that are not drainable. Make it as unhealthy for the mosquito as he has made it for us by either hatching, housing or feeding him and he will leave us alone. Cinchonize your patient and just keep on cinchonizing. Lack of screening is another evidence, in my opinion, of laziness.

If we get rid of this mosquito and by way of parenthesis the fly, we will not need screening. To me it seems the logical thing to do, is for the physician, because of his fitness for the duty to take the lead in their respective localities and let's eradicate malaria and derive some of the benefits ourselves and by so doing we will lift one of the greatest burdens off of the present generation and those coming after us will call us blessed.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF GEORGIA

Centennial Anniversary

To the Editor:

No interest in Georgia means more to its people than does its medical profession. Therefore, no opportunity should be lost on the part of not only the members of this great and rapidly advancing beneficiary of mankind, but of every man or woman of the state who is interested in broadening the possibilities of its uplift. The determination of the alumni of the Medical Department of our State University to enlarge greatly the teaching and clinical possibilities by the addition of a magnificent Centennial Memorial building thereto is a step which well deserves the encouragement of every doctor, or other citizen of Georgia, both by word and action in the shape of contributions, whether these be large or small. This institution is the state's oldest medical center. The writer happens to have an uncle who became a graduate of it about four score years ago, and lived to minister to the ills of mankind for many years in a Western state. This circumstance naturally brings to myself an interest of a personal nature in the move to make the institution mean more to humanity than ever before.

There are in Georgia just two medical colleges, both being a part of the state's chief universities, and I am sure that no one will deny that they mean more to mankind than any other department of these centers of learning. Then let all pardon the urge which makes Georgia's doctors get unitedly behind any such move as that now begun by the alumni of the Georgia University Medical Department. Especially should every doctor in the state make it his affair to aid in securing contributions, not only from among his conferers in medicine but from among his friends among the laity, who should feel an abiding interest in every such move.

J. G. DEAN, M. D.

Dawson, Ga., January 14, 1929.

To the Editor:

Replying to your very kind favor of the 19th of December, and mailed on the following day, will say that I was taken sick with flu on the morning of the 21st, and I am now just able to be up in my room. I have never been so very ill at any time, but just sick enough to be confined to bed and room. I am being very careful and getting in fine shape now.

I thank you very sincerely for the opportunity of saying something to show my endorsement of the worthy project, and lend my little influence to "boost" the movement. I regret so much that for providen-

tial reasons I was denied this happy privilege.

As an alumnus of the "Medical Department of the University of Georgia," I could but enthusiastically favor the building of the "Centennial Memorial Building."

The dedication of the January issue of the Journal to the above purpose was so commendable that I want to here extend my unmixed gratitude to its able management. But even beyond this the thing that wins my ungrudging admiration is the broad visioned friendship and support given the "Medical Department of the University" by Atlanta, Emory University, the physicians of Fulton County, and the Fulton County Medical Society. If ever one thing above another challenged my utmost respect it was broadness of vision, bigness of heart, generosity of soul, and a heaven full of grace—all of which has been made manifest in abundance by the gracious people referred to in the foregoing. This demonstrated spirit negatives the presence of one atom of selfishness. I would as confidently look for an angel in purgatory, or a sinner in paradise, or satan enthroned in heaven, as to search for a taint of selfishness, meanness, narrowness, or smallness in the unusually magnificent spirit portrayed by the people, I'd be glad to pay due tribute.

Dr. W. A. Mulherin in the January number of the Journal, very commendably manifests the divine injunction of "Let brotherly love continue," by paying Emory University a just and much deserved tribute. Another very apt statement made by Dr. Mulherin is that the "Medical Department of the University of Georgia" does not belong to the medical profession of Augusta, but to every physician and citizen of this great state. Surely the people of our state, especially the medical profession, are to be judged or measured by the status of medical education in the whole state, and all her schools. It is not surprising that Dr. Mulherin should voice such noble sentiments for we wouldn't expect to gather crab apples off a sweet apple tree. To know him is to admire, adore, respect, and love him.

The movement has been so fully, accurately, ably set forth by representative men of the profession in the state that there is little else needed to be said. Included in this number are Drs. Kelly, Mulherin, Miller, President Sharp, Dean Goodrich, Dancy, Boland, Smith, Daniel and Harvard.

After appreciating and endorsing all the gospel so ably enunciated by all these authorized spokesmen of the profession of our states, I desire to insist that we all re-dedicate ourselves to the end and task that we make Georgia in the future what she has ever been in the past the equal of any state in the south in medical education and standing.

E. T. COLEMAN, M.D.

Graymont, Ga., January 29, 1929.

ORGANIC HEART DISEASE*

Concerning the Diagnosis

EDGAR D. SHANKS, M.D.,
Atlanta

Certain clinics for the study of cardiology claim that only one-third of the patients presenting themselves for examination actually have organic heart disease. R. C. Cabot states: "Most diagnoses of heart disease, whether made by physicians or suspected by the patient, are in my experience wrong. In such cases the heart is usually sound."

When one considers the foregoing statements and then reflects on the much published reports that heart disease is on the increase it would appear that diagnoses are incorrect. On the other hand, when one makes a search of the mortality tables of insurance companies and finds that their death rate in applicants who have heart murmurs is two and one-half times greater than in applicants without murmurs, and that most of their examinations are made by the average physician, it is reasonable to suppose that only a casual examination and a note in regard to some murmur is good evidence that the patient has organic heart disease.

In recent years the American Heart Assn., recognized the conflicting statements in re-

*Read before the Emory Medical Alumni Association, Academy of Medicine, Atlanta, June 7, 1928. (Part of symposium on Organic Heart Disease.)

gard to what constituted a correct diagnosis of heart disease and began a movement to correct the situation. A committee from this organization worked out a classification and in 1926 submitted a report which claimed three points, namely, that every cardiac diagnosis should have—first, an etiology; second, a statement in regard to structural change; and, third, a statement in regard to function. It was believed that the great mass of clinical, bacteriological and post-mortem evidence justified such procedure.

The classification covers ten groups so far as etiology is concerned but the interesting point is that when the various groups are tabulated it is found that three groups, namely, rheumatic, syphilitic and General Systemic Disease (commonly called hypertensive) cover over ninety per cent of all organic heart disease. Certain observers, notably Cabot, claim that fully seventy-seven per cent of heart disease is of the hypertensive variety, without valvular changes, and that 22 per cent can be classified as valvular heart disease. In the latter group rheumatic and syphilitic etiology cover 18 to 20 per cent with the rheumatic group predominating. The only other group recognized with frequency was the acute and subacute bacterial endocarditis cases which made up less than five per cent of the total series. Other types of heart disease, such as the unknown group, thyroid heart, toxic heart, neurotic heart, trauma and congenital developmental defect cases made up less than one per cent of the series and are considered as unimportant in the diagnosis of the average case presenting for examination.

Other writers place the incidence of the so-called infectious diseases with resulting cardiac pathology somewhat higher with the hypertensive group as low as fifty per cent. Also, certain observers, notably Paullin, H. M. Davison and Wood, believe that the syphilitic group exceeds the rheumatic group in the negro race.

In regard to structural changes the official classification covers 32 points dealing with anatomical changes, such as atrophy, hypertrophy, valvular conditions, endocarditis, myocarditis, pericarditis, fatty degeneration, etc.

Under the head of physiological classification will be found seventeen descriptive terms dealing with rhythm, hypertension, congestive heart failure, effort syndrome and anginal syndrome.

In regard to function three main groups are covered, first, that group of patients with organic heart disease who are able to carry on ordinary physical activity without discomfort; second, that group which is unable to carry on ordinary physical activity without discomfort; third, that group with signs and symptoms of heart failure when at rest, unable to carry on physical activity without discomfort.

An additional group is provided to record patients who may give a history suggesting possible heart disease but who have no signs or symptoms.

Examples of diagnoses are given, for example: Inactive Rheumatic Fever, valvular disease, mitral insufficiency and mitral stenosis; auricular fibrillation; activity greatly impaired.

How are we to utilize such a classification? In addition to having a knowledge of the usual diseases affecting the heart we must obtain accurate histories of our patients. The age of our patient will give us a clue as to what type of heart disease we are dealing with, indeed it would be possible to make a fair number of correct diagnoses on age groups alone. Acute rheumatic fever affects the individual in the first thirty years of life, as a rule, and when we know that over fifty per cent of the cases develop cardiac pathology with the first attack and practically all cases have heart damage with subsequent attacks we see the importance of histories which are carefully tabulated.

Syphilis is acquired in early life but so often the cardiac damage is not evident for 15 to 20 years. This interval may be shortened in the colored race but it must be remembered that the negro begins sexual relations early in life. The average age for a syphilitic heart case is nearer forty than thirty.

The large group, namely, the hypertensive

group, begins in the fourth decade and the number of cases increase with each decade.

Congenital syphilitic heart disease is seen in very young individuals, usually between the ages of 15 and 20 as is certain types of pericarditis, notably tuberculous pericarditis.

Acute and subacute bacterial endocarditis cases have a gradual rise with each decade up to middle life, then a rapid decline.

All other conditions affecting the heart, such as the diseases of childhood, thyrotoxicosis, nervous instability, osteomyelitis and puerperal sepsis are seen in the first half of life. Anemia and diabetes are to be considered in diagnoses about middle life, and the terminal pericarditis cases associated with nephritic hypertension are seen between 30 and 40.

Keeping in mind the age and history of the patient we come to a consideration of the three great groups, namely, rheumatic, syphilitic and hypertensive heart disease. Not only do the cases fall into different age groups but the lesions produced are in most instances quite characteristic and physical and laboratory findings are fairly uniform. The findings may be altered considerably by various stages of heart failure, and too by combined valvular lesions such as are found in a small number of the rheumatic cases.

The rheumatic heart is in most cases associated with a history of polyarthritis or perhaps only growing pains, preceded by attacks of sore throat. In other cases the picture is a typical choreic individual with no arthritis. The diagnosis of cardiac damage may be made during the acute attack in which case there is persistent tachycardia, a systolic murmur at the apex and a weakening of the first sound; later there is evidence of enlargement of the heart and it is generally believed that a diagnosis should be withheld until there is definite enlargement. The picture in a few cases may show a general carditis with acute heart failure and terminate fatally. In the chronic and recurrent cases the picture is one of pure mitral disease and in the majority of cases there is evidence of presystolic thrill, right sided enlargement, a snappy first sound and murmurs which may be both systolic and diastolic in time but particular attention is invited to the presystolic murmur characteristic of mitral stenosis, this murmur being brought out best in the sitting position. Palpitation is a very constant symptom.

The syphilitic heart is easy of diagnosis in the well defined cases; the patient is 35 or 40, the heart is markedly enlarged, the carotids throb, the second aortic sound is duller than normal, usually there is a definite diastolic murmur at the second right coastal cartilege and in many cases there is a systolic blow at the apex due to the dilatation of the mitral ring; the blood pressure shows a high pulse pressure depending on the aortic regurgitation. On the other hand, there are cases, probably in the majority, which do not show definite involvement of the aortic valves but have more of an aortitis and two of the most prominent symptoms are pain under the upper sternum and extreme breathlessness. The pain varies from a sense of tightness or burning to the utter torture of severe agina. The heart may or may not be enlarged. Fever of a low grade may be present. In these cases the history of recent infection with syphilis is desirable and the Wassermann test is of much value. There are still other cases that seem to show a picture which we think of as syphilitic myocarditis in which we have acute heart failure and finally death, sometimes sudden death. Usually we see these in men of forty or more but the picture of congenital syphilis is not unlike this. Aneurisms are so often associated with syphilis that we now consider the majority of them as due to this disease but no doubt some are arteriosclerotic, especially after the age of fifty. Fluoroscopic and x-ray examinations offer the best solution for a diagnosis of aneurism. Pain is a constant symptom of cardio-vascular syphilis and the disease must be kept in mind in certain conditions with surgical aspects.

The hypertensive heart is seen most often after 40 and in this group are included all types of hypertension, namely, essential hypertension, chronic hypertension associated with arteriosclerosis of the large vessels, chronic hypertension associated with nephritis and hypertension associated with dia-

betes. The classification is not entirely satisfactory because there are cases of heart disease included in this group which seem to never have a hypertension and which some writers prefer to call senescent heart disease, hence the General Systemic Disease group in the official classification.

Essential hypertension may be seen as early as twenty-five years of age. Little is known in regard to the etiology of this condition but it is distinguished from the nephritic type not on blood pressure findings but by kidney function tests and ophthalmoscopic examinations. The nephritic group develop a terminal pericarditis with regularity but die a nephritic death.

The chronic hypertension associated with arteriosclerosis of the large vessels cover a large group of the cases and it is in these cases that we see cerebral hemorrhage and cardiac failure but more of them die of infection, trauma and surgical operation. They are distinguished from the nephritic group by kidney function tests and the fact that the diastolic pressure is usually around 100 while the diastolic pressure of the nephritic cases is considerably higher.

The hypertensive heart shows very little change in size unless there is evidence of heart failure and passive congestion. Pounding of the arteries of the head and neck, weakness and arrhythmia are the most constant symptoms. In the cases showing heart failure various physical signs will be found but none are of value in diagnosis except an enlarged heart and chronic passive congestion.

URINARY ANTISEPTICS

(Continued from Page 77)

because the lobes are more traumatized by the catheter than is the open bladder neck of the tabetic).

9. It is of no value in any of the chronic established infections excepting the ones mentioned. Its use in gonorrhea is comic.

Dr. Montague Boyd, Atlanta (Closing): There were so many points in connection with this subject that I could not bring them all out in the abbreviated time I was allowed by the president. One point brought out by Dr. Floyd, in connection with my using hexylresorcinol: It is often very effective and worth trying in cases having infections.

ACRIFLAVINE AS AN INJECTION IN COLITIS*

W. L. WILKINSON, M. D.
Bainbridge

Several years ago I wrote a paper on the use of Neutral Acriflavine intravenously. At that time I mentioned the fact that in comparison with mercurochrome, it seemed to have a more specific effect on intra-abdominal infections, particularly the colon bacillus. In pursuance of this observation I began to use the drug as an injection in infections of the intestinal tract.

In search of reference for this paper there seemed to be an abundance of literature on the use of the drug for other purposes, but a dearth of information on the subject sought. However, about a year ago one observer, Rosenwald I believe, gave a technique for using acriflavine in dysenteries, particularly those of a chronic type. He used irrigation of one pint of a solution of the drug varying in strength from one to five thousand depending on the stage of the condition treated.

In our early experience we were rather prejudiced against injections of any sort in the treatment of colitis. Indeed it is a mooted question today; some men as Fischer recommending the procedure very highly, while others condemn it with equal vehemence. It is our belief that the proper use of saline or saline and soda solution is very beneficial in combating the toxemia, replacing the fluid and relieving at the same time terrible tenesmus.

Perhaps if we would come to look upon an acute intestinal toxemia as an infection rather than a disordered metabolism, varying in degree from the sick child with the putrefactive stool to the sicker child with same odor coupled with diarrhoea and blood we would bend every effort toward a quicker ridding of the intestine of the offending organism thereby achieving a quicker relief of symptoms.

Case Reports

With this hope we used the drug on fifteen cases with rather happy results. In

*Read before the Second District Medical Society at Albany, Georgia, October 14, 1927.

five of the early cases with ten to fifteen copious bloody stools a day there was an almost complete cessation of symptoms after the third daily injection. One little fellow after being sick for three weeks and having a flare up from a food indiscretion, received four injections and convalesced nicely. The other nine had been sick from three to five weeks and were treated daily for an average of five days with distinct clearing up of symptoms and a more rapid convalescence. It was noticed that the odor of the stools improved almost immediately and the straining was relieved almost as quickly.

The following technique was used. Elevate the baby's hips and introduce a pint of saline slowly and allow the bowels to be cleansed of fecal matter and mucus, the advantage of this is twofold; you get rid of the intestinal debris allowing your drug to absorb better, and you relieve the little patient temporarily of the tendency to strain which is also necessary if you are to get full benefit from your medication. Four ounces of one to five thousand acriflavine solution is then introduced through the irrigator followed by perhaps one or two ounces of saline to clear the tube, then your catheter is slipped out exercising care not to let the solution escape. The buttocks are then grasped firmly and held for from ten to twenty minutes until the tendency to strain has passed. After that the bowels may be flushed again or if it is the first dose the drug may be allowed to pass with the next stool. When the urine has become thoroughly colored, however, the drug should be washed out after ten or fifteen minutes. The coloring of the urine seems to be a practical index to follow and the appearance of the drug here is also a safeguard against the urinary infection which is very apt to occur.

The dose recommended is four ounces of a one to five thousand solution each day, increasing one ounce a day until the urine becomes highly colored. In older children begin at six ounces and increase two a day until you reach your color index or until the intestinal condition is cleared up.

In conclusion we would like to say that acriflavine seems to be a very useful drug in colitis; that its effect is both local and general; that to get the best results it had best be used by yourself or somebody thoroughly trained in order that the absorption of the drug may be attained.

LUMBAR PUNCTURE

CHARLES E. DOWMAN, M. D.
Atlanta

There must be some definite cause when a patient objects to submitting to a particular diagnostic procedure. The mere mention of lumbar puncture frequently brings an expression of horror to the patient's face and often a positive objection to submitting to such a procedure. On questioning such patients they will usually relate how some friend suffered with intense headaches for many days after a lumbar puncture had been done; how another friend suffered excruciating pain at the time of the puncture; how another had pain in one leg for many weeks afterwards, etc. It is indeed unfortunate when a procedure of such value should be brought into ill repute, especially when proper precautions should prevent the occurrence of such dire results which cause the laity to object to having the test done on themselves or on members of their families.

A brief discussion of the contraindications, technique and after care, might be of some value to those who may be called upon to perform lumbar punctures. At the Piedmont Hospital the procedure is done as a matter of routine in the examination of practically all cases suspected of having some lesion of the central nervous system, unless there be a positive contraindication. No pain is produced, a so-called "dry" puncture seldom occurs, and very rarely the patient suffers with "lumbar puncture headaches." The reason for this is the strict observance of certain fundamental principles of procedure.

A satisfactory "Lumbar Puncture Tray" should consist of the following:

1. One 2 cc. glass syringe with two needles (one small regular hypodermic needle for injecting novocain into the skin and one two-inch needle for deep injections.)
2. Two lumbar puncture needles with properly fitting stylets.
3. One glass tube, 30 cm. long, and 0.5 cm. in diameter, with centimeter markings,

fitted with a small rubber connection and an adaptor to fit the puncture needle. (This makes a simple and reliable manometer which can be sterilized by boiling).

4. Sterile 1% novocain solution and sterile medicine glass.

5. Package of sterile gauze sponges.

6. Iodine solution and alcohol.

7. Sterile test tubes.

8. Two sterile artery clamps for handling needles, sponges, etc.

A lumbar puncture should never be done in the physician's office. The reason for this is the necessity of absolute rest in a proper position for 24 to 48 hours after the puncture has been performed. A disregard of this fundamental rule will result in severe headaches in many cases. Such headaches are discussed among friends and are largely responsible for the frequent objections when the necessity of puncture is mentioned. It is not the removal of a few cubic centimeters of spinal fluid which causes the headache. Several years ago in a series of cases I carefully measured the spinal fluid pressure before the removal of fluid. After the removal of fluid an equal amount of sterile salt solution was injected and the pressure restored to the same level as that obtained before. The patients were allowed to get up after a few hours, with the result that many of them developed severe headaches lasting from one to several days. It became evident that there occurred a continuous escape of fluid through the dural puncture hole into the tissues of the back. In this way there is an enormous spinal fluid drainage with the consequent lowering of intracranial pressure. Such an alteration in pressure is productive of headaches. The drainage will continue until the hole in the dura has been sealed over. This is brought about by the arachnoid gluing itself, as it were, to the opening. Since the arachnoid is a very thin membrane, the patient should be put in a position which will prevent as far as possible the effect of fluid pressure against this delicate structure as it lies over the hole in the dura. Otherwise it will rupture and the escape of fluid into the tissues will continue.

As soon as the needle has been withdrawn the patient should be placed on the abdomen, and pillows removed, and the foot of the bed elevated. This posture should be maintained for six hours or more. The force of gravity against the hole in the dura is thereby minimized and the arachnoid is given a reasonable chance to seal over the hole in the dura. After six hours the patient may be allowed to assume the prone position but should not get up for at least forty-eight hours after the puncture has been performed. Since observing this rule very few of our patients have developed headaches.

Contraindications to lumbar puncture. A lumbar puncture should never be performed in the presence of markedly increased intracranial pressure except in a few cases where one is certain that the increased pressure is due to a fluid accumulation in the subarachnoid space and not due to tumor of the brain. Where there has existed for a considerable period of time increased intracranial tension due to tumor, the medulla and tonsils of the cerebellum are usually shoved down more or less into the foramen magnum. On examining brains removed at autopsy where tumors are present one not infrequently observes a ring-like depression around these structures where they have rested firmly against the edges of the foramen magnum. The release of spinal fluid under such conditions will cause this herniation to become more aggravated and there is great danger of respiratory distress and death. Such respiratory symptoms may not occur for several hours after the puncture has been done. The risk of causing death in this manner is entirely too great to warrant the practice of lumbar puncture in cases of this type. One of the most reliable methods of determining the presence of chronic increased intracranial pressure is the examination of the optic discs. If such examinations disclose a choking of the discs a lumbar puncture should not be done.

Technique. With the patient lying on the side and the knees drawn up and the shoulders bent forward the space between the fourth and fifth lumbar spines is marked

(Continued on Page 99)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

FEBRUARY, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

THE ABNER W. CALHOUN LECTURESHIP

During the past few years we have witnessed the tendency to change some of the methods of presenting programs at state and other medical meetings. Such innovations appear to meet the enthusiastic approval of the profession. For example, clinics are fast displacing the mere reading of papers. This is a change which should be utilized whenever feasible. A well-conducted clinic always holds the average audience of medical men far better than anybody's essay, and it is a proven better method of instruction. A paper is apt to deal with generalizations, always hazardous, whereas a clinic brings out facts as we find them in dealing with patients.

Another popular innovation is the establishment of lectureships whereby distinguished and able lecturers and teachers from outside the state may be present to give not only a single discourse but a series of discourses. The larger the resources of the lectureship the more extensive the series may be, and the finer the talent which may be attracted. Some lecturers will not accept remuneration, in which case the lectureship fund would profit. It would not be expected, however to bring eminent teachers from a distance, especially full-time men, without at least paying their expenses.

A substantial fund is needed for a purpose like this, and such is the object of the Abner W. Calhoun Lectureship, named in honor of a former president of the Medical Association of Georgia, the pioneer oculist of the South, and one of the outstanding specialists of America. It would save much energy and thought to have such a fund presented by an individual or a group of individuals, but the interest of more members of the Association will be enlisted by contributions of all amounts from as great a number as possible.

An average subscription of ten dollars from one thousand doctors in Georgia would put the Calhoun Lectureship on a successful and permanent basis. The money raised to date falls far short of ten thousand dollars. The Association has endorsed the project and has authorized the president to appoint a committee to take charge of it. Every member approached is in sympathy with the idea, and has promised financial support, but only a few have sent in checks.

From the small contribution each physician will make to this enterprise he will receive in return instruction and inspiration which he could not get by other means for ten times as much. Every member of the Medical Association of Georgia is urged to give what he can at once, and there is no limit to the amount that will be acceptable. The functioning of the Lectureship in 1928 was made possible by a single gift, but if it is to continue to function uninterruptedly checks must be forthcoming without delay.

FRANK K. BOLAND, M.D.,
Atlanta.

CRAWFORD W. LONG MEMORIAL PRIZE

For several years a generous donor has tendered the Medical Association of Georgia a valuable prize known as the Crawford W. Long Memorial Prize. It consists of a very handsome emblem and one of which the recipient has always been deeply appreciative and justly proud. It is given as a separate prize each year to the author of the best essay on his own original work, which must be presented before the annual convention of the Medical Association of Georgia. After being read before the Association it then passes into the hands of a committee of five members of the Association who independently selects the winner according to their judgment. These are submitted to the chairman and he announces the winner in accordance with the selection of the committee.

The Crawford W. Long Memorial Prize will again be offered this year, but according to the rules governing same it will not be donated unless the best essay is of sufficient merit.

The prize is given with the idea of stimulating original work in medicine throughout the membership of this Association. It is not intended that this work should be confined to the laboratory. Original work at the bed side is of equal importance with that in the technical departments of our hospitals and medical schools.

The committee trusts that there will be a splendid manifestation of interest this year in this contest. Now is the time to summarize your work and observations made in recent months. After this is done mould them into the form of an essay and submit the title to program committee promptly so that the author will have the opportunity of presenting it before the convention in Macon, May 8-10, 1929. It matters not what line of work you are pursuing, whether with the advance guard of the country practitioner, or in the fortified recesses of our educational institutions, you are eligible to be a contestant for this prize. As a matter of fact the donor of the prize is particularly anxious that those in the general practice of medicine appreciate the object of this prize and take advantage of it by presenting an essay on some of their best work. Any essay containing original thought and work and delivered before the Association may be presented to this committee in the contest for the Crawford W. Long Memorial Prize. The author will have the satisfaction of knowing that only the winner of the contest is announced.

WILLIAM R. DANCY, M.D., *Ch'n.*,

Savannah.

COMMITTEE ON SCIENTIFIC WORK

The members of the Committee on Scientific Work are especially anxious to present to the members of the Medical Association of Georgia an attractive, instructive and creditable program at the State Meeting in Macon, next May.

The plan as followed last year at the Savannah meeting, of holding clinics and presenting scientific papers, will be continued.

Any member desiring to present a paper at the Macon meeting is hereby reminded that March 15th, 1929, will be the last day for receiving titles and abstracts of papers. This year the committee will require of each applicant for a place on the program, that he submit with title an abstract of paper, of not more than 50 words.

The program of Macon meeting will appear in the April issue of our Journal. Begin now to make your arrangements to attend the State meeting. Let's give President Sharp and our other efficient officers, a practical demonstration of our appreciation for their most excellent administration, by registering the largest attendance ever recorded at a State meeting.

W. A. MULHERIN,
C. W. ROBERTS,
ALLEN H. BUNCE,
Committee on Scientific Work.

Annual Session, Macon, May 8, 9, 10.

INSTITUTE FOR TEACHING PRACTICAL OBSTETRICS

Professor James R. McCord, of the Department of Obstetrics of Emory University, has consented to hold a short school or institute in the various Congressional Districts of Georgia for the purpose of teaching practical obstetrics and giving the very latest data to the physicians of our state.

This has been made possible through the cooperation of the State Board of Health and the Children's Bureau of the Department of Labor, Washington, D. C. This short and intensive course in the principles and practices of obstetrics will be given first in the Eleventh Congressional District at the Y. M. C. A. Building at Waycross, Ga., beginning at 2 P. M. on April 8 and continuing through the week.

Professor McCord will hold evening meetings if it is desired by the physicians in attendance. It must be realized that this is a rare opportunity for the physicians of our state to get the very latest information on the practices of obstetrics and we feel quite sure that they will respond as they should to this opportunity. Professor McCord will also be the guest of the Eleventh Congressional District Medical Association at Homerville on the 9th.

Of course it is not worth while perhaps to make the statement, but all the instructions will be free of charge. Physicians should make arrangements to spend the entire week at this Institute so that they can have the opportunity not only to hear Professor McCord, but also see films that are furnished by the Children's Bureau from the clinics of the leading obstetricians of the United States, England, Germany and France.

Dr. W. F. Reavis, of Waycross, is chairman of the Committee On Arrangements and the institute will be held under the auspices of the Eleventh District Medical Society.

JOE P. BOWDOIN, M.D.,
Deputy Commissioner of Health.
Atlanta.

SOME OBLIGATIONS TO ORGANIZED MEDICINE

(Continued from Page 66)

In conclusion let me remind you that the committee on the revision of our by-laws and constitution is at work. Within a few weeks you will have presented, for your consideration, certain changes looking to the betterment of our Society. It is normal for human minds to differ, and perhaps there will be some difference of opinion as to the wisdom of making the changes suggested by your committee, however, if we must differ, let us do so in that spirit which harbors no personalities, and which, in the end, will do honor and credit to organized medicine.

CHRONIC INDIGESTION

(Continued from Page 72)

sure, incontestable diagnosis. The average patient thinks that "stomach trouble" means stomach disease. He does not know that indigestion may mean tuberculosis, diabetes, cardio-vascular-renal disease, or morbidity of some organ far removed from the stomach. Probably the x-ray is of more value for its negative than for its positive findings. It is indispensable in ruling out ulcer, cancer and other organic disease of the gastro-intestinal tract.

In closing let me say that what the dyspeptic patient needs is not a tube or a tonic, not a picture or a white powder, nor even a "spinal adjustment," but a doctor who will give him an examination.

Summary—The Four Fours of Indigestion

Four Classes:

1. Functional.
2. Organic.
3. Reflex.
4. Constitutional.

Four Methods of Examination:

1. History. Indispensable.
2. Physical examination. Indispensable.
3. Gastric analysis. Of little value.
4. X-ray. Highly useful.

Four Outstanding Symptoms:

1. Pain.
2. Vomiting.
3. Hemorrhage.
4. Loss of weight.

Four Causes For Loss of Weight:

1. Tuberculosis.
2. Malignancies.
3. Glucosuria.
4. Hyperthyroidism.

District and County Societies

DISTRICT OFFICERS

FIRST DISTRICT

President.....Myers, William H., Savannah
1st Vice-Pres.....Elarbee, Geo. W., Daisy
2nd Vice-Pres.....Ezell, Howard E., Oliver
Sec'y-Treas.....Long, Wm. V., Savannah

SECOND DISTRICT

President.....Chason, Thomas, Donalsonville
Vice-Pres.....Sanchez, S. E., Barwick
Sec'y-Treas.....Watt, Chas. H., Thomasville

THIRD DISTRICT

President.....Lunsford, G. G., Cordele
Vice-Pres.....Daves, V. C., Vienna
Sec'y-Treas.....Greer, Chas. A., Oglethorpe

FOURTH DISTRICT

President.....Clark, W. H., LaGrange
Sec'y-Treas.....Callaway, Enoch, LaGrange

FIFTH DISTRICT

President.....Fort, A. G., Atlanta
Vice-Pres.....Camp, R. T., Fairburn
Sec'y-Treas.....Evans, J. R., Decatur

SIXTH DISTRICT

President.....Miller, G. T., Macon
Vice-Pres.....Hunt, K. S., Griffin
Sec'y-Treas.....Thompson, O. R., Macon

SEVENTH DISTRICT

President.....Harbin, R. M., Rome
Vice-Pres.....Wood, C. V., Cedartown
Sec'y-Treas.....McCord, M. M., Rome

EIGHTH DISTRICT

President.....Carter, D. M., Madison
Vice-Pres.....Gholston, W. D., Danielsville
Sec'y-Treas.....Gerdine, Linton, Athens

NINTH DISTRICT

President.....Coker, Grady N., Canton
Vice-Pres.....Neal, L. G., Cleveland
Sec'y-Treas.....Bennett, J. C., Jefferson

TENTH DISTRICT

President.....Cranston, W. J., Augusta
Vice-Pres.....McGahee, R. C., Warrenton
Sec'y-Treas.....Phinizy, Irvine, Augusta

ELEVENTH DISTRICT

President.....McMichael, J. R., Quitman
Vice-Pres.....Fleming, Albert, Folkston
Sec'y-Treas.....Reavis, W. F., Waycross

TWELFTH DISTRICT

President.....Franklin, R. C., Swainsboro
Vice-Pres.....Edmondson, J. W., Dublin
Sec'y-Treas.....Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.

2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richland, November 12, 1928.

3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.

4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.

5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.

6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.

7. Jasper County, Dr. E. M. Lancaster, Shady Dale, January 19, 1929.

8. Ben Hill County, Dr. L. S. Osborne, Fitzgerald, January 21, 1929.

9. Taylor County, Dr. J. C. Hind, Reynolds, January 29, 1929.

10. Monroe County, Dr. J. O. Elrod, Forsyth, February 6, 1929.

11. Barrow County, Dr. W. L. Matthews, Winder, February 7, 1929.

NEW MEMBERS FOR 1929

Alden, H. S., Atlanta.
Banister, W. G., Plainville.
Borders, D. J., Calhoun.
Bridges, R. R., Leary.
Brinson, J. B., Monticello, Fla.
Brown, F. Bert, Augusta.
Bullard, J. H., Machen.
Burke, B. Russell, Atlanta.
Bush, John, Columbus.
Cross, R. C., Winder.
Darden, Holt, Blakely.
Harp, S. M., Calhoun.
Hill, E. H., Rock Springs.
Holmes, Walter P., Wadley.
Hubert, M. A., Athens.
Joiner, B. O., Tennille.
Lanier, J. R., Thomasville.
Liggin, S. B., Reynolds.
Martin, J. D., Plains.
Massee, J. C., Atlanta.
McElroy, John, Fitzgerald.
Middleton, D. S., Rising Fawn.
Peacock, J. D., Wadley.
Pilcher, John J., Wrens.
Roule, J. Victor, Augusta.
Striplin, M. D., Funston.
Weeks, Richard B., Augusta.
Whelchel, Fred C., Gainesville.
Wright, J. E., Macon.

COUNTIES REPORTING FOR 1929

Cherokee County Medical Society

Cherokee County Medical Society announces the following officers for 1929:

President—Geo. Carter Brooke, Canton.
Vice-President—John P. Turk, Nelson.
Secretary-Treasurer—Grady N. Coker, Canton.
Delegate—Thomas J. Vansant, Woodstock.

Clarke County Medical Society

Clarke County Medical Society announces the following officers for 1929:

President—Corbin J. Decker, Athens.
Vice-President—Linton Gerdine, Athens.
Secretary-Treasurer—Albert A. Rayle, Athens.
Delegate—C. J. Decker, Athens.

Thomas County Medical Society

Thomas County Medical Society announces the following officers for 1929:

President—Mary J. Erickson, Thomasville.
Vice-President—J. M. King, Metcalf.
Secretary-Treasurer—C. K. Wall, Thomasville.
Censors—C. H. Ferguson, J. N. Isler and Rudolph F. Bell.

Telfair County Medical Society

Telfair County Medical Society announces the following officers for 1929:

President—W. H. Powell, Lumber City.
Vice-President—T. D. Fussell, McRae.
Secretary-Treasurer—C. J. Maloy, Helena.
Delegate—Frank Mann, McRae.
Censors: T. J. McMillan, A. O. Harrell and T. D. Fussell.

Washington County Medical Society

Washington County Medical Society announces the following officers for 1929:

President—R. L. Taylor, Davisboro.
Vice-President—N. Overby, Sandersville.
Secretary-Treasurer—B. L. Helton, Sandersville.
Delegate—E. S. Peacock, Harrison.
Censors—J. R. Burdett, J. B. Dillard and F. P. Harbin.

Taliaferro County Medical Society

Taliaferro County Medical Society announces the following officers for 1929:

President—Thos. C. Nash, Philomath.
Secretary-Treasurer—Dr. A. T. Ray, Sharon.
Delegate—John A. Rhodes, Crawfordville.

Jasper County Medical Society—100%

Jasper County Medical Society announces the following officers for 1929:

President—J. F. Anderson, Hillsboro.
Vice-President—F. S. Belcher, Monticello.
Secretary-Treasurer—E. M. Lancaster, Shady Dale.
Delegate—R. F. Cary, Monticello.
Censors—J. A. Brown, L. Y. Pittard and J. F. Anderson.

Ben Hill County Medical Society

Ben Hill County Medical Society announces the following officers for 1929:

President—Frank Ward, Fitzgerald.
Vice-President—G. W. Willis, Ocilla.
Secretary-Treasurer—L. S. Osborne, Fitzgerald.
Delegate—L. S. Osborne, Fitzgerald.
Censors—E. A. Russell, D. B. Ware and E. J. Dorminy.

Clayton-Fayette Counties Medical Society

Clayton-Fayette Counties Medical Society announces the following officers for 1929:

President—T. J. Busey, Fayetteville.
Secretary-Treasurer—H. D. Kemper, Jonesboro.

Henry County Medical Society

Henry County Medical Society announces the following officers for 1929:

President—J. G. Smith, McDonough.
Vice-President—E. G. Colvin, Locust Grove.
Secretary-Treasurer—H. C. Ellis, McDonough.
Delegate—R. L. Tye, McDonough.

COMMUNICATIONS

GEORGIA LAW IN RE. EXPERT TESTIMONY

To the Editor:

Answering your questions about compelling a physician to testify and about paying his fee as a witness, we state that in our opinion:

1. A physician can be forced to testify, even as to facts learned from a patient or from the examination and treatment of a patient.

2. Any witness residing in this state, including a physician, can be compelled to attend any court in this state under a subpoena in any criminal case.

3. A witness for the state in a criminal case attending court in a different county from that of his residence shall receive $2.00 per day during has attendance, and his actual traveling expenses, not to exceed four cents per mile in going and returning. If he is subpoenaed in more than one case, he shall receive per diem pay and mileage in one case only, provided that a witness whose residence or whose place of business is within three miles of the court room attended by him shall be paid for attendance seventy-five cents per day and no mileage.

4. The presiding judge may at his discretion require the state to pay the $2.00 per day and traveling expenses for a witness for the defendant in a criminal case.

5. In a civil case no witness can be compelled to attend court held in any county other than the county of his residence.

6. In all civil cases the witness fee is seventy-five cents per day.

7. No witness can refuse to testify on the ground that he has not received his "per diem" or mileage.

8. The Court of Appeals of Georgia in the case of Schofield v. Little, 2 Ga. App., on page 287 held:

"While no statute in Georgia allows or prohibits fees to expert witnesses, and while there can be no charge beyond the legal fees of ordinary witnesses for attendance on the court in obedience to subpoena, still as a physician can not be required to make any examination or preliminary preparations, or to listen to the testimony in order the better to give his opinion as an expert, he may for such services demand extra compensation."

9. A physician could refuse to make any examination or preliminary investigation until he received his fee as an expert.

BRYAN & MIDDLEBROOKS, Attorneys.
January 21, 1929.
Atlanta.

To the Councilors:

As Councilor of your District Medical Association, will you not kindly call the attention of the practicing physicians in the several counties of your district to the opportunity provided by the University of Georgia, through the cooperative administrative agency of the Medical College in Augusta and the Division of University Extension in Athens, for a postgraduate medical extension course in Pediatrics for general practitioners, as described in the enclosed letter.

Also, please indicate your personal attitude on the enclosed return postal card.

We shall be very grateful for your kind interest and cooperation.

J. C. WARDLAW,
Director of University Extension.

Athens, Ga.
January 23, 1929.

POST-GRADUATE COURSE IN PEDIATRICS

To the Editor:

I enclose a copy of a letter which is being mailed to nearly all of the practicing physicians in the state.

You will note that the University of Georgia is announcing a new type of postgraduate medical extension course in Pediatrics for general practitioners, under the cooperative administrative agency of the Medical College in Augusta and the Division of University Extension in Athens.

As editor of the Journal of the Medical Association of Georgia and secretary of the Medical Association of Georgia, will you not kindly bring this opportunity in any way which you may consider appropriate to the attention of the practicing physicians of Georgia.

We shall very greatly appreciate your kind interest and cooperation.

J. C. WARDLAW,
Director of University Extension.

Athens, Ga.
January 26, 1929.

CLINICS*

Dear Doctor:

The University of Georgia takes pleasure in announcing to the physicians of Georgia a postgraduate medical extension course in Pediatrics for practicing physicians, through the cooperative administrative agency of the Medical College in Augusta and the Division of University Extension in Athens.

We are fortunate in being able to secure as instructor Dr. Wayne A. Rupe, eminent practitioner and clinician, formerly of the medical faculty of Washington University, St. Louis, Missouri, and more recently postgraduate instructor in Pediatrics in the Universities of North Carolina, Oklahoma, Kansas and Wisconsin, where he has been conducting similar extension work.

No science is making more rapid progress than the science of medicine, and no science requires more constant study in order to keep abreast. In the larger towns many doctors get away every year for a few weeks of study in some medical center in order to keep up with new and vital discoveries—the progress of medical science and practice. Many physicians, however, are too busy or are so situated that they cannot leave their practice for even a short time. They realize just as keenly the need of postgraduate training, and many have urged that some plan be devised which will provide this training for the physician without loss in his practice.

This new type of postgraduate medical extension course is offered by the University of Georgia as one part of its enlarged program of service to the physicians of the state, and it is being administered jointly by the Medical College and the Division of University Extension with a view of offering the busy physician an opportunity to keep abreast by bringing just the information he desires in such a way as to give him the greatest possible service.

The course will begin during the week of February 17 and will continue for six weeks. The plan is as follows:

The course will be offered in six different centers. The instructor will go to town A on Monday of the first week and will give a one-hour lecture and hold a one-hour clinic, with the clinical material supplied by the local members of the class. He will go to town B on Tuesday and will give the same lecture and hold another clinic. On Wednesday he is in town C, Thursday in town D, and Friday in towns E and F. On Monday of the second week the instructor will return to town A to give the second lecture and hold the second clinic, and on Tuesday of the second week he will go to town B and give the second lecture and hold the second clinic; and so on for the six weeks. In each center six combined (two hour) lectures and clinics, one a week for six weeks, will be given on the subject of Pediatrics for the general practitioner.

An outline of the course is given on the enclosed

*Clinics will be held from time to time and at centers selected during the post-graduate courses given by the Extension Division of the Medical Department of the University of Georgia.

sheet. Members of each group will furnish the clinical material in each center on the same day of the week for six weeks. The time for the classes will be determined by those wishing to take the work.

The first lecture will be given during the week of February 17, and the course will close during the week of March 24. To those physicians who take the course a certificate will be given. There will be no examination of any kind. It is expected that fifteen physicians will enroll in order to insure the course for any center.

The fee for the six weeks' course will be $30.00, payable at the beginning of the course, for which each physician also will receive up-to-date material on the diseases and feeding of children.

If you believe that courses of this kind are desirable and will be beneficial, kindly indicate on the enclosed postal card the extent of your interest and approval. The first class groups will be organized in those sections of the state showing the best response by February 1. Upon receipt of replies to this letter, not later than February 1, definite announcement of the six centers selected for this postgraduate medical extension course and exact dates and hours of the meetings in each center will be mailed to those who return the cards promptly.

We sincerely hope that you will take advantage of this opportunity. *Please fill in and mail the enclosed postal card immediately, whether you are interested or not.*

J. C. WARDLAW,
Director of University Extension.

Athens, Ga.
January 23, 1929.

PROBABLE SUBJECTS OF LECTURES, POSTGRADUATE MEDICAL EXTENSION COURSE IN PEDIATRICS

February 17-March 29, 1929

1. (A) The importance, diagnosis, prevention and treatment of infantile rickets.

(B) Rachitic tetany, the commonest cause of convulsions in infancy and childhood; its diagnosis and treatment.

2. Minor and major problems in handling the breast fed baby, with especial attention to colic.

3. Artificial feeding, new and very simple methods.

4. Nervous colic, pyloro spasm and pyloric stenosis.

5. Digestive and diarrheal disturbances in infancy, causes and treatment.

6. Contagious diseases.

It is probable that many more conditions can be discussed if sufficient clinical material is produced.

Members of each medical extension group will furnish the clinical material in each center on the same day of the week for six weeks.

General Note:—Discussion limited to recent information of practical nature. No theory except as it is necessary to explain therapeusis.

To the Officers of County Societies:

As an official of your County Society of the Medical Association of Georgia will you not kindly call the attention of the practicing physicians of your Society to the opportunity provided by the University of Georgia, through the cooperative administrative agency of the Medical College in Augusta and the Division of University Extension in Athens, for a postgraduate medical extension course in Pediatrics for general practitioners, as described in the enclosed letter.

Also, please indicate your personal attitude on the enclosed return postal card.

We shall be very grateful for your kind interest and cooperation.

Yours very truly,
J. C. WARDLAW,
Director of University Extension.

Athens, Ga.
January 23, 1929.

To the Editor:

I have delayed thanking you for the big send off that you gave us in the January issue of the Journal that I am ashamed of myself.

It was fine and no man who has the interest of this campaign at heart can but be grateful to you.

I am also enclosing you title and brief synopsis of paper for Macon meeting.

R. L. MILLER.

Waynesboro,
February 12, 1929.

To the Editor:

I am returning the corrected proof of Marion's book. The corrections are those that I should have made in the copy in the first place.

This is the fourth book in medicine that I have reviewed for an Atlanta author. It is the best one. I hope it will stimulate others to write of their valuable experiences and that it will have a fine sale, itself.

Atlanta doctors have laid an excellent and secure foundation in medicine and the scientific superstructure they are erecting should begin to enlighten the world by its comeliness.

RICHARD R. DALY, M. D.

Atlanta,
February 14, 1929.

To the Editor:

As an alumnus of the Medical Department of the University of Georgia, and as a Georgia doctor interested in the future of the health and medical attention of her people, I wish to thank you and to congratulate you on the January issue of the Journal.

GUY G. LUNSFORD, M.D.,
President Third District Med. Assn.

Cordele, Ga.
January 28, 1929.

Page missing.

these cases, and is pleasantly free from technical terms and much of the psychological jargon which has created a gap between internal medicine and psychiatry. The general practitioner should welcome a volume of this kind.

WM. A. SMITH, M.D.

The Thyroid Gland. By Charles H. Mayo, M.D., Professor of Surgery, University of Minnesota, Mayo Foundation, Rochester, Minn., and Henry W. Plummer, M.D., Professor of Medicine, University of Minnesota, Mayo Foundation, Rochester, Minn. One of the Beaumont Foundation Lectures. 83 pages. C. V. Mosby Co., St. Louis. 1926. $1.75.

The book is divided into two parts. Part one is written by Dr. Mayo and discusses the history and etiology of goiter as well as the anatomy and physiology of the thyroid gland, thyroxin, bacteriology and biologic chemistry of goiter, geographic distribution and incidence. The parathyroids are touched upon.

Part two is written by Dr. Plummer. It deals with the function of the thyroid gland, classification of goiter, hyperthyroid states and the theory of dysfunction of the thyroid gland.

The chief value of this book is that it tells us all that is known about the thyroid gland up to the present time. The subject of the book is close to the heart of both authors as they have probably studied the thyroid gland, in health and disease, more closely than any other two men in the world. The book contains many valuable statistics some of which are from the United States War Department.

This book should be treasured by all who are interested in the thyroid gland.

E. A. BANCKER, JR., M.D.

ABSTRACT

DIABETES MELLITUS IN TWINS

The cases reported by Allen H. Bunce and Mark S. Dougherty, Atlanta, Ga. (Journal A. M. A., Jan. 5, 1929), are unusual, first because the patients were twins and, second, because both cases manifested themselves within a few months of each other and not until the patients were 27 years of age, and, third, because the patients presented certain congenital anomalies in common. One patient had a convergent strabismus with an amblyopia of the left eye, while the other had a divergent strabismus with an amblyopia of the right eye. This mirror effect of a congenital defect in identical twins is very rare and presents interesting possibilities of speculation. Both men had a horizontal nystagmus of both eyes and a rather high degree of hyperphoria, and both had a partial deafness of the conductive type. They responded to the same treatment and maintained a normal blood sugar on the same diet plus 20 units of insulin daily. A review of all the cases of diabetes mellitus in twins thus far reported fails to reveal any extraneous etiologic factor. There is no one period in life in which the disease seems to occur more frequently than in any other. However, it usually develops in twins simultaneously and runs the same clinical course. The occurrence of a disease in identical twins would seem to indicate some inborn or hereditary constitutional factor, while the development of a disease in one twin and not in the other would seem to indicate some other etiologic factor. A similarity in two persons that is as marked as in these men and extends alike to appearance, character, metabolic disturbances and even to the finer details of similar congenital defects would seem to render them more liable to develop the same disease.

NEWS ITEMS

The Surgical Association of the Atlanta and West Point Railroad Company, The Western Railway of Alabama, and the Georgia Railroad, held its annual meeting at the Ansley Hotel, Atlanta, February 7. Dr. O. C. Wenger of the United States Public Health Service, who has charge of the Government Hospital in Hot Springs, Arkansas, delivered an address on "Syphilis Among Railway Employees." He set out the importance of diagnosis, the dangerous prognosis, and the necessity of prompt, efficient and adequate treatment.

Dr. G. Y. Moore, Cuthbert, read a paper on the "Medical History of Georgia" before the Rotary Club meeting held at Cuthbert on January 25. The members commended Dr. Moore for the interesting paper and the facts set out.

Atlanta Good Health Exposition to be held at the Auditorium, Atlanta, during the week of April 8th, has been endorsed by Mayor I. N. Ragsdale. The exposition is sponsored by the Junior Chamber of Commerce.

The State Board of Health held its annual meeting at the offices of the Board on January 30. Hon. Robert F. Maddox, Atlanta, was re-elected president; Dr. J. H. McDuffie, Columbus, vice-president. Dr. T. F. Abercrombie, Commissioner of Health, made his annual report, which showed an appreciable decrease in the number of deaths from typhoid fever, smallpox, whooping cough, diphtheria, bronchitis and similar diseases, but an increase in the death rate from malaria, measles, scarlet fever, influenza, diabetes, pellagra and pneumonia. Tuberculosis in the state is gradually declining and showed a decrease of 25 per cent during 1928. The new sanatorium at Alto is aiding in the fight against the white plague. Dr. Abercrombie stated that the death rate was higher than in 1927 on account of the prevalence of influenza and other diseases, while the birth rate was slightly lower. He gave the birth rate as 17.6 per 100,000 population against a death rate of 10.9. The commissioner warned the board that pellagra was a real health problem with a death rate of 26 per 100,000 population, which was twice the number of deaths from typhoid. There were 577 deaths from malaria in 1928, an increase of 87 per cent over 1927; 1,030 deaths from influenza; 2,281 from tuberculosis; 2,616 from pneumonia; 214 from suicides; 484 homicides; 403 from auto accidents;

220 from diphtheria; 163 from whooping cough; 445 from typhoid.

Major George S. Woodward, formerly on the staff of the Walter Reed Hospital, Washington, D. C., has been assigned to duty as medical officer at Fort McPherson. He succeeds Captain Maxwell G. Keeler, who will be assigned to some other point.

Stockholders of the John D. Archbold Memorial Hospital, Thomasville, held their annual meeting on January 15. Trustees and officers were elected for the ensuing year.

Dr. Thos. J. Charlton, Savannah, was elected president of the Health Center at a recent meeting of the officers held at headquarters on Charlton Street, Savannah.

The Georgia Health Officers Association, at its annual meeting held on January 25, 26, appointed a committee to redraft Georgia's public health laws along modern lines, and to report at the annual session of the Medical Association of Georgia to be held at Macon, May 8, 9, 10. Those appointed are: Mr. R. C. Ellis. Americus, attorney and author of the Ellis Health Law; Governor L. G. Hardman; Dr. T. F. Abercrombie, Commissioner of Health; Hon. M. L. Duggan, Superintendent of Schools; Dr. Allen H. Bunce, Secretary-Treasurer of the Association, Atlanta; Mr. J. S. Stewart, Athens. Dr. G. T. Crozier was elected president of the Georgia Health Officers Association.

Miss Mary E. Jones, Rome, technician at the Habin hospital, has been admitted to the American Registry of Radiological Technicians.

Medical examinations were given to fifty thousand four hundred forty-two children in Atlanta during 1928 under the supervision of the health department. Twenty-nine hundred and nineteen babies under four years of age were examined at the baby health centers. Prenatal care has been given to thirty-five hundred and eighty-four mothers at the clinics, as well as intensive instruction on infant care.

The Pan-American Medical Association held its first congress at Havana, Cuba, December 21 to January 3. Delegates representing twenty-one nations of the western hemisphere were in attendance. Dr. Francisco M. Fernandez, Cuban Secretary of Sanitation, was elected president for 1929.

Dr. J. R. Anthony, Griffin, was elected county physician for Spalding county at a recent meeting of the board of commissioners.

Dr. Wm. G. Lee, Macon, was elected chairman of the board of directors of the Macon National Bank.

Dr. James R. McCord and Dr. Dan C. Elkin, Atlanta, were awarded prizes by the Fulton County Medical Society at a recent meeting for the best papers read before the society during the past year.

Dr. Chas. E. Waits, Atlanta, in his inaugural address as president of the Fulton County Medical Society on January 3, suggested an amendment to the constitution of the State to provide for a State Board of Alienists, to have final decision in questions of insanity and to replace the conflicting testimony of experts in criminal trials.

Dr. T. L. Holcombe, formerly of Union Point, has removed to Jefferson.

Parke, Davis & Company, Detroit, Michigan, announces the appointment of Dr. Louis Klein as promotion manager and Mr. Ralph G. Sickels as advertising manager. Both men have been connected with the company for a number of years, Dr. Klein as manager of the department of medical service, and Mr. Sickles as a member of the advertising staff.

Dr. A. William Lescohier has been appointed general manager of Parke, Davis & Company, according to announcement made public on January 10 by Oscar W. Smith, president of the company. Dr. Lescohier has been connected with the company for the past twenty years and recently held the position of assistant to the president. After graduation from the Detroit College of Medicine in 1909 he entered the company's employ as a member of the scientific research staff; in 1918 he was placed in charge of the production of serums, vaccines, antitoxins, and other biological products. In professional circles the appointment of a physician and research scientist to this important post will doubtless be noted with interest.

Dr. W. D. Travis, Covington, was elected by the council as health officer for Covington.

Dr. F. P. Harbin, formerly of Oconee, has removed to Tennille.

Dr. W. J. Tatum, formerly of Fort Gaines, has moved to Richland.

The American College of Physicians will hold its thirteenth annual clinical session at Boston, Massachusetts, April 8 to 12. Hotel Statler will be headquarters. Dr. Russell H. Oppenheimer, Atlanta, is a member of the Board of Governors.

The American Association for the Study of Goiter will hold its annual meeting this year at Dayton, Ohio, March 25, 26, 27. The primary object of the Association is to bring together each year men who are especially interested in the study of Goiter and its associated problems. Members of state and provin-

cial medical societies are eligible and cordially invited to participate as attending members.

Drs. J. N. Ellis and Frank Eskridge, Atlanta, attended the first congress of the Pan-American Medical Association held at Havana, Cuba, December 21 to January 3.

The American Association for the Advancement of Science awarded the $1,000.00 prize to Dr. Oliver Kamm, director of chemical research of Parke, Davis & Company, for the most noteworthy contribution to science presented at its annual meeting. About two thousand scientists delivered addresses at this meeting, which was held in New York. The award was announced by Dr. Henry Fairfield Osborn, president of the Association. The isolation of two hormones from the posterior lobe of the pituary gland, as revealed by Dr. Kamm, is held by chemical scientists to be equal in importance to the isolation of insulin and the discovery of adrenalin.

The Randolph County Medical Society held its annual clinic on February 7th at the Patterson Hospital, Cuthbert. Clinics were held by physicians from the University of Georgia Medical Department, Augusta, on pediatrics, internal medicine and public health.

Allen's Invalid Home, Milledgeville, announces the opening of a new hospital building for women patients with fifty private rooms, hydrotherapy, sun parlors, and rooms for diversional occupations.

The American Medical Editors' Association in a brief report of its activities for 1928 show that at the time of its reorganization, a year ago, the membership comprised one hundred and seventeen editors, and as a result of President Hunt's energetic effort, they now have three hundred and twenty-eight editors, and represent not only practically every medical journal in the United States and Canada, but an overseas list in Great Britain and France, so that from a fractional organization, it has developed into an international organization, the only one of its kind in existence.

A meeting for the Control of Malaria was held at Albany on January 18. Dr. C. K. Sharp, president of the Medical Association of Georgia, called the meeting to order and spoke on the dire necessity of such a meeting and urged that definite action be taken. Hon. Edgar Frye, Mayor pro tem of Albany, welcomed the visiting physicians to the city. Dr. T. F. Abercrombie, Commissioner of Health, Atlanta, gave an interesting talk on the necessity for the Control of Malaria. His address was supplemented by Dr. M. E. Winchester, Director of County Health Work, with illustrations by maps and charts showing that malaria had increased. Dr. C. C. Bass, New Orleans, Dean of Tulane University of Louisiana School of Medicine, spoke on the Control of Malaria in the Carrier. Dr. L. L. Williams, Washington, Surgeon of the United States Public Health Service, spoke on the Control of Breeding Places of Anopheles mosquitoes by the use of Paris green. On motion of Dr. T. F. Abercrombie, a committee was appointed to study ways and means for the control of malaria in Albany and adjacent territory, as follows: J. M. Patterson, Albany; Dr. J. A. Redfern, Albany; Miss Emily Woodward, President Georgia Press Association; E. B. Baggs, Camilla; Dr. J. G. Dean, Dawson; Dr. T. F. Abercrombie, ex-officio.

Dr. M. F. Haygood, Nashville, Tennessee, was elected secretary of the Southern Tuberculosis Conference at a recent meeting of the executive committee held in the offices of the State Tuberculosis Association, Atlanta.

Annual Congress on Medical Education, Medical Licensure and Hospitals was held at the Palmer House, Chicago, February 18, 19, 20.

The Spalding County Medical Society met at the Griffin Hotel, Griffin, on January 15. Officers of the society for 1929 were installed.

Dr. and Mrs. C. L. Ayers, Toccoa, entertained the members of the Stephens County Medical Society at a dinner party on January 16.

Dr. M. A. Rountree, formerly of Adrian, moved to Thomaston and will continue the practice of medicine at the latter location. He practiced at Adrian and vicinity for thirty-five years.

Report of the Committee to Investigate Training of Midwives in Virginia shows that there are forty-eight hundred forty midwives in the state, that deliveries by midwives are about one-half the number delivered by regular practicing physicians. Letitia White, Newport News, claims a wonderful record for the practice of midwifery. She has practiced fifty-three years, delivered one hundred thirteen cases during the past year, and states that she has never lost a mother or a baby.

MARRIAGES

Dr. Walter G. Elliott, Cuthbert, to Miss Cora Belle Brewton, Atlanta, December 8, 1928.

Dr. Robert B. Ridley, Atlanta, to Mrs. Lillian Taylor Jones, Decatur, January 16, 1929.

OBITUARY

Dr. Andrew J. Johnson, Baxley, University of the South Medical Department, Sewanee, Tennessee, 1901; aged 59; died at his home on December 20 of pneumonia. He was born in Montgomery county and later moved to Appling county, where he attended the rural schools of the county. Dr. Johnson took an academic course at Perry Rainy College in Gwinnett

county before taking up the study of medicine. He practiced at Baxley and in that vicinity for twenty-eight years. Funeral services were held at the Midway Baptist church and interment in the church cemetery.

Dr. George M. Barwick, member, Soperton, Emory University School of Medicine, Atlanta, 1895; aged 62; died at his home on January 9th after an illness of a month's duration. He practiced medicine at Soperton for 34 years. Dr. Barwick served two terms in the General Assembly of Georgia. He represented Montgomery County in 1917-18 and when the county of Treutlen was created, he was elected in 1919 to serve as the county's first representative. Surviving him are his widow, one son, W. C. Barwick; three daughters, Miss Bessie Barwick, Soperton; Mrs. C. E. Downs and Mrs. Reuben Rutenberg, Bowdon. Funeral services were conducted from the residence and interment in the city cemetery.

Dr. Julius M. Underwood, member, LaFayette. Jefferson Medical College of Philadelphia, Pennsylvania, 1883; aged 73; died January 2nd at the home of his daughter, Mrs. James Mitchell, Chattanooga, Tennessee, of pneumonia. He enjoyed a large practice in his home city and vicinity where he had lived for more than forty years. Dr. Underwood was a fellow of the American Medical Association, member of the Masonic lodge and the First Baptist church. Surviving him are his widow, four daughters, Misses Ruth, Opal and Linkie Underwood, and Mrs. Lucy Mitchell, Chattanooga, Tennessee; two sons, Julius and Francis Underwood. Funeral services were conducted from the First Baptist church and interment in the LaFayette cemetery.

Dr. John D. Goodwin, Kingston, aged 82; died at his home January 12. He was one of the last surviving confederate veterans of Bartow county and a practicing physician almost continuously since the War Between the States. Surviving him are his widow, two sons, H. B. Goodwin, Halls, Georgia; Will Goodwin, Atlanta; two daughters, Mrs. Mary Rogers and Mrs. Will Maddox, Atlanta. Funeral services were conducted from the residence and interment in the city cemetery.

LUMBAR PUNCTURE

(Continued From Page 86)

with the fingernail. After sterilizing the skin with iodine and alcohol a few drops of one per cent novacain solution are injected into the skin at the point of the proposed puncture. The longer needle is now put on the syringe and two to four cc. of one per cent novacain solution is injected on either side of the ligament between the spinous process to a depth of fully four to five cm. After waiting for a few minutes to allow the parts to become thoroughly anesthetized the lumbar puncture needle is passed inward and slightly upward in the midline until a distinct "pop" is felt as the needle pierces the dura. It is well to withdraw the stylet from time to time as the needle is advanced in order to be sure that the needle has not been passed too deeply. Should the patient complain of pain in either leg the point of the needle is directed laterally and not directly in the center. The needle should therefore be promptly withdrawn and inserted in the correct direction. By using sterile sponges to handle the needle it is not necessary that one sterilize the hands. When the stylet is withdrawn and a few drops of fluid obtained, the tube manometer should be connected and the fluid allowed to ascend to its maximum level in the tube. The height of the fluid column is now read off in millimeters. The patient is cautioned not to strain or to cough as this will cause the fluid to ascend to an abnormal height. A spinal fluid pressure which measures over one hundred and twenty millimeters indicates an increased amount of pressure. The jugular veins are now gently compressed. If there be no spinal canal obstruction the fluid will promptly rise in the tube, and on release of the jugular pressure will promptly fall to the original level. The upper end of the glass tube is now lowered and about five cc. of fluid allowed to drop into each of two sterile tubes. This will give a sufficient amount of spinal fluid for serological and other examinations.

In conclusion I wish to emphasize that the greatest caution should be exercised in the performance of a procedure of such great diagnostic worth as is lumbar puncture. The occurrence of death following such a procedure naturally brings the method into great disrepute. Such unfortunate occurrences can be prevented if the eye grounds be examined as a matter of routine before lumbar puncture is done, and puncture avoided in all cases presenting choked discs. The proper use of a local anesthetic and the exercise of the greatest care in passing the needle in the proper direction will absolutely prevent suffering on the part of the patient. The strict observance of a proper postural treatment for 48 hours after the puncture has been performed will minimize to a great degree the occurrence of lumbar puncture headaches.

COUNCIL MEETING

Dr. M. M. Head, chairman of Council, has called a meeting to be held at the Dempsey Hotel, Macon, Wednesday, March 6th, at 12 o'clock, Eastern time. The Councilors will meet with the Committees On Public Policy and Legislation of the Association and the Fulton County Medical Society. Dr. C. K. Sharp, President, has called a conference for the purpose of considering a legislative program. The members of the State Board of Health, the Woman's Auxiliary, State Health Officers Association, Parent-Teachers Association and others interested in medical legislation are expected to attend. It is desirable that all forces in the State combine in an effort to secure new medical legislation. The conference will determine what this program should be.

INTRADERMAL TREATMENT OF ARGYRIA

Arthur William Stillians and Theodore Kenneth Lawless, Chicago (Journal A. M. A., Jan. 5, 1929), show that the intradermal injection of a mixture of 1 per cent potassium ferricyanide with 6 per cent sodium thiosulphate removes a large part of the silver from the skin in old cases of argyria, with deep pigmentation.

INFLUENZA HANGS ON

While the influenza epidemic, which had its start on the Pacific Coast and swept eastward, has been characterized as "mild" by health authorities, many serious complications have followed in its path. Deaths from pneumonia have exceeded previous years and severe colds have persisted even after the epidemic had apparently been checked.

In this emergency physicians report excellent results from the use of Abbott remedies. Among the most widely used are Calcidin, Ephedrine, Ephedrine Butesin Spray, Metaphedrin, M. Catarrhalis Combined Bacterin, Metaphen, Neonal, Sodoxylin and Abbott's Saline Laxative.

A special Influenza circular has been prepared by the Abbott Laboratories, North Chicago, Ill., which will be sent on request.

FOR SALE
BEAUTIFUL COUNTRY HOME

11 miles from Five Points, Atlanta, on Roswell Road. 12 acre estate. New 2-story brick home, slate roof, oil heat, hardwood floors, tile bath and lavatory. Living Room 18 x 36 with 2 fireplaces. Harris Water System, electricity. Chicken brooder, runs, 3-room caretaker's house. Offered by an estate at considerably under cost of home alone. Call or write for details.

ADAMS-CATES COMPANY
REALTORS
208 Grant Building Atlanta

AWTRY & LOWNDES
FUNERAL DIRECTORS
AMBULANCE SERVICE

East Side Hospital

Nashville's Private Maternity Home

A MOST WORTHY INSTITUTION

For care of unmarried women, during pregnancy and confinement, all forms of publicity avoided, babies boarded or plans for adoption when arranged for, providing it is a normal child.

Best prenatal and post-natal care by graduate nurses and best doctors. A strictly modern hospital conducted in a strictly ethical manner and in accordance with the highest type of the medical profession. Correspondence confidential.

Write or wire, attention given day or night.

ADDRESS

SUPERINTENDENT, EAST SIDE HOSPITAL

514 Russell St. Telephone 3-0131
NASHVILLE, TENN.

Orders-Inquiries Can be Secured by MAIL

POLK'S REFERENCE BOOK *and* Mailing List Catalog

Gives counts and prices on over 8,000 different lines of business. No matter what your business, in this book you will find the number of your prospective customers listed.

Valuable information is also given as to how you can use the mails to secure orders and inquiries for your products or services.

Write for Your FREE Copy
R. L. POLK & CO., Detroit, Mich.
Largest City Directory Publishers in the World
Mailing List Compilers—Business Statistics
Producers of Direct Mail Advertising

LET US COLLECT YOUR SLOW ACCOUNTS FOR YOU.

COMMISSIONS AS LOW AS 25%. NO OTHER CHARGES.

Endorsed by American Medical Association and State Societies. References: Bradstreets; Chamber of Commerce; Commerce Trust Co. or publishers of this journal. Satisfied clients everywhere.

SEND FOR LIST BLANKS

Physicians & Surgeons Adjusting Association

RAILWAY EXCHANGE BUILDING. KANSAS CITY, MO.

SITUATIONS WANTED

WANTED: Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians', 320 N. Michigan Ave., Chicago, member The Chicago Association of Commerce.

Doctors' Exchange - - Nurses' Registry

Also known as Physicians and Surgeons' Exchange

1001 Ponce de Leon Ave., N. E., Atlanta (3 Phones) Hemlock 6300. Nurses for any kind of case anywhere. Registered Graduate, Undergraduate and Practical. White, colored and male.

Hourly Nurses and Masseuses.

"IMPARTIAL - - ETHICAL - EFFICIENT"

LABORATORIES OF

DRS. BUNCE, LANDHAM and KLUGH

ATLANTA, GEORGIA

GEORGE F. KLUGH, M. D., Director Laboratory of Clinical Pathology

JACKSON W. LANDHAM, M. D., Director Laboratory of Radiology (X-Ray and Radium)

Pathology, Bacteriology, Serology, Metabolism, Chemistry, Electrocardiography, X-Ray and Radium

These laboratories are equipped for making every test of clinical value in the diagnostic study of medical and surgical cases.

In addition to the diagnostic study of cases there are adequate facilities for the x-ray and radium treatment of conditions in which these forms of treatment are indicated.

Containers for pathological specimens and information furnished upon request.

Address

Drs. Bunce, Landham and Klugh,

139 Forrest Avenue, N. E. Atlanta, Ga.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | March, 1929 | No. 3

MALARIA CONTROL*

A Discussion of Certain Practical Features

C. C. BASS, M.D.†
New Orleans, La.

Our discussion of practical control of malaria will be facilitated by a brief statement of certain well known principles or facts relative to the mode of transmission of the infection from one person to another, upon which all control measures depend for their success.

Malaria is due to infection with malaria parasites. They are present in variable numbers in the circulating blood and in larger numbers in the capillaries of certain organs and tissues of the body. Following infection the parasites multiply and when they become sufficiently numerous certain symptoms of disease are produced.

There is the greatest difference in different individuals as to their resistance to the multiplication of malaria parasites. In one individual they multiply rapidly and produce severe illness, while in another they may not multiply sufficiently to give rise to any recognizable effects whatsoever. The exact nature of this resistance to the multiplication of malaria parasites is not now definitely known, but we do know that it exists and that it is very variable in different individuals.

The number of malaria parasites in the blood of infected persons varies from many in the case of persons with active clinical symptoms—persons who are sick with the disease—to none or so few that they cannot be found by present methods of examination. Furthermore, a person who has very few parasites in his blood at one time and no symptoms whatever, may have many more at another time which may or may not give rise to active symptoms. This variation in the number of parasites and in the symptoms produced is influenced by the treatment that the patient receives, but it also occurs independently of any specific medication.

Following an attack of active malaria which may have been relieved by treatment or which may have abated from little or no treatment, there may be a period of from a few days to a few weeks or a few months of freedom from symptoms, followed by relapse, with another attack of clinical symptoms and many parasites in the blood. However, the infection dies out in due course of time, in from a few months to a year or more in nearly all cases. It is not unusual for a person to carry over his infection from one year and have a relapse about the same time the next year, but it is very rare indeed that the same infection lasts for as long as two years.

If we examine the blood of a person who has malaria, we find the parasites which multiply and give rise to the clinical symptoms of the disease. These parasites multiply or reproduce by a process of asexual reproduction known as schizogamy. In a variable proportion of persons with malaria, ranging usually from 10 to 50 per cent, upon careful examination we can find, in addition to these asexual parasites which multiply and give rise to the clinical symptoms, from a few to many other parasites which are sexually differentiated. They are male and female and those who are familiar with work of this kind can identify the different sexes. These sexually differentiated parasites are known as gametocytes. They do not reproduce in man and individual parasites die out

*Read at the Conference on Malaria, held under the auspices of the Georgia State Board of Health, Albany, Georgia, January 18, 1929.

†Dean and Professor of Experimental Medicine, the School of Medicine, Tulane University of Louisiana.

in from a few days to two or three weeks. It is also of interest that these parasites are much more resistant to quinine or other specific medication which is very effective against the asexual parasites.

If we draw blood containing gametocytes which, as we have already pointed out, do not reproduce in man, and, after making suitable preparations, observe it under the microscope, we may note that within a few minutes the male parasites throw out a few flagella-like projections which soon break away from the parent and swim about in the fluid. To some extent they resemble in appearance and in their action spermatozoa of higher animal life. Some of them can be observed to swim around until they come in contact with female parasites which they quickly enter. In this way sexual fertilization takes place. The fertilized female parasites become actively ameboid and are capable of developing through a further stage of reproduction known as sporogony.

If blood containing gametocytes is drawn from an infected person by certain species of mosquitoes the sexual activity described takes place. The fertilized female gametocytes, which are now called zygotes, burrow through the stomach of the mosquito and remain attached to the outer surface of the stomach or mid-gut within the abdominal cavity of the insect. Here they grow rapidly until they reach maturity in about three weeks or longer. The mature organism consists of a large cyst or capsule containing large numbers of small fusiforms organism or sporozoites. At this time the capsule ruptures, setting free the sporozoites which are now carried to different parts of the body of the insect. Some of them reach the salivary glands and the fluid contained therein. Here they seem to be able to live for long periods of time. Such an infected mosquito is now capable of infecting any person she bites by introducing the young malaria parasites with the juice from the salivary gland, which she injects into the skin when she bites. In this way and in this way only is malaria carried from one person to another.

Mosquitoes are not naturally infected, but get their infection from an infected man. Man is not naturally infected, but gets his infection from infected mosquitoes. If there were no mosquitoes there would be no transmission of malaria from one man to another. Measures which prevent the breeding of anopheline mosquitoes in a given area and within the effective flight range of such mosquitoes prevent entirely the transmission of malaria within the area. Those who are already infected finally lose their infection as the result of treatment or otherwise and the disease disappears from the area.

Since the mosquito must pass one stage of its life in suitable collections of water, breeding can be prevented by eliminating such collections of water by clearing, filling and draining. Many examples can be cited where mosquito breeding and also malaria transmission have been satisfactorily controlled or entirely eliminated by these measures alone. When such measures are applied to large areas, however, the total cost becomes so great as to throw some doubt upon their practicability. If we stop to carefully calculate the miles of work to be done and the cost in effort and money for expert supervision and for labor for the initial work and, in addition, the cost of subsequent maintenance, there will be less enthusiastic talk about controlling malaria by mosquito control over large areas, such as whole counties or large parts of states. It could be done, but how practical is it?

However, the fact that such measures may not be practical for large areas should not prevent their application in smaller areas wherever and whenever practical. We should not deceive ourselves into believing that the ditching and sanitating of a few square miles of territory or planting a few top minnows in a few streams and pools where no doubt within natural environmental limitations they have already existed for hundreds of years, is going to materially affect the malaria problem of any state in which the disease is prevalent to any considerable extent. It is not going to do it.

Protection against the bites of mosquitoes, especially by screening of homes, also reduces the transmission of malaria. This not only keeps out infected mosquitoes but it also pre-

vents mosquitoes from getting infected by biting infected persons. It protects mosquitoes against infection. If all homes were effectively screened in a given area, malaria would gradually but surely decline and finally disappear. To whatever extent screening can be brought about, malaria will be reduced in proportion.

I wish now to direct your attention to another means by which transmission of malaria is reduced, viz, by reducing the number of persons who are infected—malaria carriers—and the number of parasites in the blood of such infected persons. I believe there is no doubt in your mind but that the larger the proportion of the people in a given area or group who have parasites in their blood and the larger the number of parasites, the more of the mosquitoes that bite them will become infected. And the smaller the proportion of the people infected and the smaller the number of parasites, the fewer mosquitoes that bite them will become infected. Therefore curing infected persons of their infection will cut down the prevalence and the transmission to whatever extent it can be carried out.

A considerable proportion of the people who have attacks of malaria are treated by physicians. The treatment given varies considerably, but consists of quinine in some form. This is a very effective remedy. The clinical symptoms are promptly relieved in practically all cases, thanks to the high efficiency of quinine. After the clinical symptoms are relieved the patient is still infected and unfortunately physicians often do not give sufficient attention to the after treatment to cure the infection. As a result, the patient often remains infected and sooner or later relapses. The attack may be treated and relieved again and the patient again be discharged, still infected, without receiving effective treatment and advice to cure the infection. This may go on for months. During all the time the patient is a malaria carrier and a potential source of infection to others. If, on the other hand, physicians would follow up and cure the infection in all the malaria patients this would cut down the disease to that extent.

If I were going to undertake malaria control covering a county or any large area, I would first get in touch with the physicians and endeavor to secure their hearty co-operation and support. If I was unable to secure reasonable promise of their co-operation and if there was any considerable proportion of them who were practicing and would continue to practice ineffective methods of treatment to cure the infection in their malaria cases, I think I would abandon the project as not sufficiently promising to be worth while. Little success can be expected without the help of the physicians. The practicing physician can contribute largely to the reduction of malaria in the community in which he practices if he will perform his duty further by looking into the health of other members of the family or household in which he has malaria cases and by advising and treating any other carriers found.

In addition to those who have malaria who are treated by physicians, a great many others treat themselves with chill tonics and other forms of quinine. This home treatment usually soon stops the clinical symptoms. They do not know that the infection usually lasts for some time after clinical symptoms cease or that treatment should be continued for quite a long time, notwithstanding the absence of symptoms, to cure the infection. For this reason, it is necessary to get the proper information to those people who have malaria and are not treated by physicians. This is to be accomplished by publicity or educational efforts.

It is usually more successful in matters of this sort where large numbers of people are to be reached, to intensify upon one definite idea and not confuse people by trying to teach them more than they are able to grasp. In this case all effort should be concentrated upon the one idea that all persons who have malaria should take quinine for eight weeks to cure the infection or "get it out of the blood." If this idea is gotten over impressively to those who have malaria and kept actively before them, the only other important thing is to see to it that there is accessible a source of supply that is within the reach of those who need it. The most important

group to look out for consists of those who cannot afford to purchase as much quinine as they need. From a public health standpoint it is just as important for them to be cured of their malaria as others and sometimes more so. This leads us finally to consideration of what is the proper treatment to cure the infection.

For economical reasons and out of consideration for the comfort of the patient, it is desirable to give only the minimum effective dose or amount of quinine. Experience has shown that a dose of quinine daily is more effective than the same amount given two or three days each week.

If we take a considerable number of infected people and put them on five grains of quinine daily, most of them will remain well and finally lose their infection, but a good many will develop clinical symptoms and have sufficient parasites in their blood at times to infect mosquitoes even while taking the quinine. This shows that five grains daily is not sufficient to prevent attacks in some persons, nor to prevent their being a source of infection to others.

If we put a similar group of infected persons on ten grains of quinine daily, practically none develop clinical symptoms or numerous parasites in their blood, as long as the quinine is continued. This indicates that ten grains daily is sufficient and therefore there is no need to exceed this amount.

If we give to a number of infected persons ten grains of quinine daily for a period of one week and then stop it, some of them will remain free from parasites and symptoms thereafter. Many others, however, in due course of time relapse and have parasites in their blood. If we give the quinine for two weeks the infection is cured in a larger per cent, but it is not cured in many others. If we give it for four weeks we cure the infection in some 60 per cent to 70 per cent. If we give it for six weeks a larger per cent and for eight weeks, from about 90 per cent to 95 per cent are cured. Still longer treatment cures a larger and larger per cent until in from three to four months 100 per cent are cured.

If we had any way of determining in advance the length of treatment that would be required to cure the infection in each case, it would be logical to treat them accordingly, but we have no way of knowing this. Neither have we any way of determining at any time whether the infection is cured. Even the blood may be negative to present methods of examination and still the patient may be infected and may relapse later.

Since we have no way of determining the length of treatment that will be required in a given individual nor when a given individual is cured, the best that we can do at present is to select a length of treatment that gives a satisfactory proportion of cures and follow it in all cases. There is difference of opinion as to what is the proper length of time to adopt. I believe eight weeks is the best. If we use a much longer period we subject too many people who are already cured to unnecessary treatment, to cure only a few more who require a longer period of treatment. On the other hand, if the length of treatment is much less than eight weeks, the per cent of uncured cases is too large.

In conclusion, allow me to express the opinion without reservation (1) that if all homes were effectively screened against mosquitoes, malaria would gradually but surely disappear; (2) that if all persons who have malaria took ten grains quinine daily for eight weeks the disease would gradually but surely disappear; and (3) that a combination of both will give the same results in even shorter time.

STATE BOARD OF MEDICAL EXAMINERS

O. B. Walker, Elberton, President.
J. O. Elrod, Forsyth, Vice-President.
B. T. Wise, Americus, Secretary-Treasurer.
A. F. White, Flovilla.
H. F. McDuffie, Atlanta.
C. M. Paine, Atlanta.
T. J. McArthur, Cordele.
R. F. Wheat, Bainbridge.
J. M. Anderson, Barnesville (deceased).
Luke Robinson, Covington.

MEDICAL ASSOCIATION OF GEORGIA

ANNUAL SESSION

Macon, May 8, 9, 10

THE CHOICE OF AN ANESTHETIC*

C. H. Richardson, Jr., M. D.
Macon

My conception of modern surgery is an art which attempts to remove pathology, and restore physiology in living tissue with a minimum of risk.

We have heard a great deal about surgery being made safe for the patient, and then later we have approached the problem of making the patient safe for surgery, and have come to realize that the mechanical features of surgery have been too much glorified, and that a knowledge of the physiologic processes of the human body is equally essential, and that no man can have a proper conception of abnormal processes and their correction, unless he has a knowledge of the underlying biologic processes that make for repair. So it is along these lines that we must approach that irreducible minimum of surgical loss that still confronts us.

It is to one phase of this problem that I wish to call your attention today; the selection of an anesthetic in the individual case, and the bearing that it has on the risk involved, and the outcome in surgical work. This is a subject surgeons, in my opinion, give entirely too little thought to, and know entirely too little about, leaving the matter in the hands of another, when the responsibility is his own, or getting into a routine of using the same type of anesthesia and the same method of administration for all cases, good and bad. It is true that ordinarily selection is not difficult, but occasionally an intimate knowledge of the various anesthetic substances and their sequences and combinations, of their action on healthy and diseased organs, and their operative requirements. becomes imperative, if the best interests of the patient are to be considered.

We have learned to adapt the procedure of the patient, and not make the patient fit the procedure, and no where is this more true than in the choice of an anesthetic, for here the question of safety during administration, and of harmful effects upon the body tissues is of paramount importance.

At present we have no anesthetic that is devoid of all danger and it is only through the recognition of this fact by the surgeon that the mortality and deleterious after effects of anesthesia can be minimized. It is first necessary to decide between a general and a local anesthetic, and until recent years, general anesthesia, in the absence of contraindication, has been almost entirely used; but with increasing experience and technique, the field of local anesthesia has expanded, until the scope before us is almost limitless. It is the ideal anesthetic for the very young and the very old, provided we can get the cooperation of the patient, and this is the only barrier to its use in children. In the latter it has many advantages, for the air passages of children are very senstitive to ether, and as they do not stand air limitation well, local anesthesia is to be preferred to the gas anesthetics in childhood. Its greatest drawback is the difficulty of the elimination of fear.

In all respiratory and chest affections it is the anesthetic of choice; the only one ever justified in empyema, and one is surprised to find the limits of its efficiency in extensive rib resection for massive chest collapse.

In abdominal surgery it has a useful field, particularly in the starved, dehydrated victim of cancer or intestinal obstruction, and gastro-enterostomy or even gastric resection can be done with surprising facility with no additional anesthesia.

How often has one seen the tide of battle turned in obstruction by a simple enterostomy under local infiltration, and the wonderful ease of incision and drainage in the case of the distended, silent abdomen of peritonitis, and the return to bed with practically no evidence of shock, when the same risk under the influence of a general anesthetic promptly aspirates the contents of a constantly filling stomach, and drowns himself in his own secretions, frequently making his exit in the midst of the operation.

The ease with which a hernia may be repaired under local anesthesia and the clean

*Read before the Bibb County Medical Society, Macon, Ga., October 4, 1928.

cut dissection which its use requires makes it more desirable for the patient than even the surgeon.

The safety and ease with which a large pus kidney in a septic, anemic patient can be approached and drained under paravertebral block and local infiltration is very gratifying, and this also frequently holds true in the removal of stones from the pelvis of the kidney. Any operation where the kidney pedicle does not have to be pulled upon can be successfully performed under local anesthesia.

In rectal surgery it has one of its widest fields, and here it is preferable to general anesthesia under any conditions, and anyone who has done a Caudal block, or even a local infiltration, and seen the complete collapse of the sphincter ani, and the ease with which the collapsed rectum can be rolled out, and operated upon under direct vision, with complete absence of the venous congestion that occurs in the rectum under any general anesthetic, and the absence of trauma in the method of operating, is indeed wedded to his idols if he continues to do rectal work with the patient straining in the stirrups under ether. I might add that the ease of doing rectal work under local anesthesia is much increased by having the patient lying prone on his face on the table with his buttocks elevated on pillows.

It is the anesthetic of choice in thyroid surgery, save in the very toxic cases, in which the psychic element can probably be better handled under one of the gas anesthetics.

All operations on the cranium, and especially brain surgery can be most satisfactorily done under its use, and brain surgeons all over the country are turning to it in increasing numbers.

The removal of tumors from the surface of the body; reduction of simple fractures, minor amputations and almost all operations upon the extremities, may be safely and satisfactorily done under local anesthesia.

The wonderful thing about local anesthesia is that it makes men better surgeons; it teaches them to dissect clearly and sharply, and have respect for living tissue, and it carries us a few strides further from the pulling, tearing barber surgeons of the Middle Ages. It gives one a sense of security and comfort when operating, and removes the element of careless haste. In the method of its use it has its widest application in local infiltration with regional field block. Cervical block is difficult and somewhat dangerous. Brachial plexus block is unsatisfactory, dangerous and should be discarded. Paravertebral block has a limited field in rib resection, and operations upon the kidney. Transacral block is difficult, painful to the patient, and can only be satisfactorily done by an expert in all cases. Caudal block on the other hand is simple, safe, easy and ideal for all rectal work, and all operations on the male or female genital organs, and is most satisfactory for all repair work in the vagina. We have found that 20 cc of a 3 per cent solution of novocain solution injected slowly into the sacral canal through the hiatus, and then a wait of 20 minutes before beginning operation, to be the most satisfactory solution and method.

All abdominal work and hernias are done under field block with one and one-half per cent solution.

Intra-spinal anesthesia is for one especially trained in its use, who can have a special operating team, especially trained in combatting its dangers. It had best be discarded by the average surgeon, for when catastrophe occurs it is frequently overwhelming and difficult of explanation.

Just a word in regard to the substance used and the preparation of the solution for injection. Novocain or procain, according to its American nomenclature, is the drug of choice, and all others may be discarded. It should be obtained in sterile capsules or ampoules and added to the solution immediately before use. It acts better in sterile normal saline solution made from freshly distilled water, and its action is satisfactorily prolonged by the addition of a few drops of adrenalin chloride solution to each ounce of solution. Stock solutions or solutions that have been kept only a few days, should never be used, and one who obtains unsatisfactory anesthesia, or one of short duration, may find the explanation in failure to see

that these details are carefully followed. It might be added that one should be very careful to always take precaution to avoid injecting a local anesthetic into the blood stream.

At the head of the agencies for the induction of general anesthesia, stands ether—the old favorite, but now rapidly falling behind. Where a few years ago, probably about 70 per cent of all operations were performed under ether alone, and the remaining 30 per cent under all other methods combined, the exact reverse is probably true today, and in the future, ether will probably not be used in more than one operation in four. It, however, has its advantages and is probably the only one in common use, in which complete relaxation can be obtained for difficult pelvic work. Necessity makes it the anesthetic of choice in children, and it is always the choice of the operator who wants his patients completely knocked out.

But its unpleasant and often dangerous effect upon the air passages, the toxic effect of its prolonged administration upon the vital organs, its tendency to produce acidosis in the body, and its uncomfortable and prolonged nausea and exhaustion, and derangement of the gastro-intestinal tract, weigh heavily against its selection as an anesthetic of choice, and have caused many surgeons to turn elsewhere for a substitute.

It is still probably best administered by the open drop method on a cone, in spite of the claims of manufacturers of ether machines, and it is doubtful if it can be safely administered by any re-breathing method. The trouble with such machines is that they are more or less automatic, and it is difficult to adjust them to the individual patient, and the individual type of respiration. It has also been shown that the concentration of ether vapor in the re-breathing bag sometimes reaches 30 or 40 per cent and 5 or 6 per cent is the concentration that can be maintained with safety, and most of these machines have a long heavy breathing tube extending from the machine to the face mask, with the re-breathing bag located at the machine end of the tube. Hence, with each respiratory movement, the patient has to move, not only the air in the bag but the air and vapor in the tube, and it is easy to see that this puts an unnatural strain upon the respiratory apparatus, and frequently calls into play the accessory muscles of respiration, and this, if carried far enough, will obviously result in respiratory collapse. It has been shown also that it carries in its train a larger per cent of respiratory infections. Hence it might be well for those of us who are using closed ether to investigate it a little more carefully.

Chloroform is mentioned only to be condemned. It has no place in surgery today and its use borders dangerously on malpractice. Its tendency to produce in the body those very conditions which modern surgery is trying so hard to combat, and the depressing effect upon the circulation, place it outside the pale.

Ethyl chlorid is so little used as a general anesthetic that it need not be considered.

And now we come to a very interesting field of general anesthesia—the gas anesthetics, nitrous oxid and oxygen and ethylene oxygen. Nitrous oxid is an old standby that is now rapidly being replaced by ethylene. Technically, it is the most difficult to administer of all anesthetics, but when administered by a trained anesthetist, one of the safest. It produces but slight nausea, its induction is pleasant, and it is almost a specific against shock. Recovery from its effects are immediate and it has a wide range of usefulness. In minor operations, or operations upon bad surgical risks, it has its most useful field. It acts by replacing an atom of oxygen in the molecule in the blood and its margin of safety is rather narrow.

To produce satisfactory anesthesia, it has to be used in such high concentration that it is difficult to avoid cyanosis, and this has prevented its wider acceptance. It should always be administered in conjunction with oxygen, as nitrous oxid alone will not sustain life, and its induction should be slow and careful, and the anesthetist should not be hurried by the surgeon, as it requires as

long for induction as ether does, and this should never be less than ten minutes.

Ethylene is the new favorite in the field of gas anesthetics, and is rapidly replacing nitrous oxid. The fact that it can be administered with a higher percentage of oxygen, the absence of cyanosis, the great relaxation which it affords, and the appearance which the patient gives of natural sleep under its administration, the absence of shock and toxic effects, the rapid recovery and the lack of unpleasant after effects, make it almost an ideal anesthetic. This is borne out by its use in probably 70 per cent of all operations in some clinics in the country.

Its drawbacks are its inflammability and explosive tendencies, but this can be avoided by the removal of all sources of flame, grounding the machine, and by induction with nitrous oxid and oxygen, and then switching to ethylene, and as the operator closes, switching back to nitrous oxid and oxygen, which technique further precludes the danger of static explosion, which is most apt to occur at the beginning, and on removal of the mask at the close.

When deeper relaxation is needed, it can be nicely supplemented with ether, and with the modern type of gas machine, both can be administered at the same time, and when satisfactory relaxation has been obtained the ether can be turned off and the anesthesia continued with ethylene oxygen alone.

A word in conclusion about combined anesthetics, especially in the bad surgical risk.

The gas anesthetic can be nicely supplemented by infiltration with local anesthesia of the field of incision, and the shock further reduced, and the ease of operation increased. The relaxation of the abdominal wall is greater, operation can be begun earlier, and if shock or collapse occurs, the general anesthetic can be suspended and closure done under local.

In the case of a bleeding fibroid tumor of the uterus, where the patient comes in almost exsanguinated, and with unfavorable blood chemistry, I have been able with the aid of a blood transfusion and forced fluids. to convert an almost impossible risk into a fairly favorable one, by infiltration of the abdominal wall with novocain solution, then incision under local, then packing off and separation of adhesions under ethylene, then a few minutes of added ether for removal of the tumor, peritoneal toilet under ethylene, and closure under my local infiltration.

There are many problems in surgery which still confront us, and a careful study of anesthesia will help us in the solution of some of them.

CELL EVOLUTION*

In Its Relation to Health and Disease

J. L. CAMPBELL, M.D.,
Atlanta

You have often heard the expression, "from the cradle to the grave," but that phrase by no means covers life's cycle. Life begins at a time far remote from birth and many changes take place during the prenatal period which influence our immunity and susceptibility to disease.

From the earliest antiquity people have marveled at the composition of the human body. The Hebrews believed it was made from animated dust, for we read in Genesis that "the Lord God formed man of the dust of the ground and breathed into his nostrils the breath of life and man became a living soul." The Greeks taught that the body was composed of four humans—lymph, blood, yellow bile, and black bile. Indeed, this theory was maintained with slight variation from the death of Galen until well into the 19th century when Schleiden and Schwann discovered that all living tissue is composed of minute unites called *cells.*

Man and other animals, as we see them, are developed from a single cell, the egg or ovum. We have learned more about the growth and development of the body structure in the past century than was known to all the students of science and philosophy since the world began; yet we have not found

*Read before the Woman's Auxiliary to the Fulton County Medical Society, Atlanta, Ga., September 7, 1928.

FROM THE BUREAU OF VITAL STATISTICS
DEATHS FROM CANCER IN GEORGIA DURING THE YEAR 1927

Cause of Death	Grand Total	Male	Female	White			Negro		
				Total	Male	Female	Total	Male	Female
Cancer Buccal Cavity	44	29	15	32	21	11	12	8	4
Stomach and Liver	428	202	226	300	148	152	128	54	74
Intestines	132	62	70	100	46	54	32	16	16
Female Genital Organs	368	—	368	195	—	195	173	—	173
Breast	123	6	117	87	5	82	36	1	35
Skin	71	51	20	64	47	17	7	4	3
Organs not Specified	303	184	119	217	132	85	86	52	34
Total	1469	534	935	995	399	596	474	135	339

the ultimate force which produces life. A dead cell has all the physical characteristics of a living cell, but something has gone from the former—something that has not yet been discovered—and for which we must look to a supreme being, a being whom Daniel described to Belshazzar as "the God in whose hands thy breath is and whose are all thy ways." (Daniel V:23.)

The life of an individual begins with the fertilization of the ovum, the union of two sexually differentiated parent calls. Although microscopic in size, the fertilized ovum forms the only material bridge between succeeding generations. Indeed, it is the sole means of perpetuating the species and maintaining racial peculiarities. Under favorable environment it develops into an offspring possessing all of the characteristics of the species to which it belongs and many of the physical and mental peculiarities of the parents from which it sprang.

A short while after the ovum is fertilized by the sperm or male cell, it embeds itself in the mucous membrance of the mother's womb and begins its life cycle by dividing into a mass of cells which, for a time, at least, are all alike and form a cluster resembling a mulberry. Presently they separate into three planes and change their size and shape to assume the duties destined for them in the formation of the body. With the precision of highly trained soldiers, a group of cells assemble, change their shape and assume the task of forming the brain and nervous system. So complete is their evolution that it would be impossible for even the greatest expert to recognize them as having come from the ovum. This process is repeated, group by group, each cell assuming its proper place and changing its size and form to make a definite organ which continues to grow until it has reached the size and shape which nature intended for it. Then, as if impelled by a mighty force, these assembled organs begin to function, each in perfect order. The impulse to move, generated in an area of the brain, is transmitted to a muscle and motion begins. At birth, the change of environment stimulate another center; the lungs expand; the welcome cry is heard; and so, in order, each organ responds until all the functions are established and the completed living body, evolved from a single cell, has become an independent individual.

Man, in common with other animals, has inherited certain basic principles; such as self preservation, perpetuation of the species and the various emotions. Our present theory in regard to heredity, or the transmission of organic diseases through the plasma of the parent cells, is undergoing radical changes, for there is no proof that it occurs. On the other hand, there is definite proof to show that the offspring inherits a predisposition to both physical and mental diseases affecting the parents and becomes more susceptible when the condition is present in both parents or their families.

A line of demarcation between heredity and prenatal transmission of infectious diseases must be recognized. It is a well established fact that syphilis is transmitted through the placental circulation from the mother's blood and pock marks have been observed in infants born to mothers recently recovered from smallpox.

Time does not permit a detailed discussion of these wonderful phenomena. The human mind is almost incapable of comprehending them and grows so accustomed to them that we become unmindful of the fact that each of us is

"Some woman's son . . . so dearly bought
With patience and in travail wrought
For nine long months."

As development proceeds in the embryo changes take place in the cells. They become more stabilized. Rapid division gives place to function, so that before birth many of the cells have changed from the embryonic type, which is characterized largely by growth, to the adult type, specialized for definite function. Thereafter, they thrive only in proportion to their ability to assimilate food.

Undoubtedly, where evolution has occurred reversion may take place. A group of cells in some organ or part of the body may take advantage of this fact and, reverting to the embryonic type, throw off the restraint of law and run wild, as it were, to form an "autonomous new growth of tissue," capable of performing no useful function and reaching no definite termination. Such a growth is cancer!

Cancer is today the outstanding menace of civilized woman. It has possibly never occurred to you that of the 1,469 deaths from cancer in Georgia last year, 935 were women, of whom 596 were white; that 15 to 20 per cent of all women over 40 years of age will ultimately die of cancer.

When Columbus discovered America a baby had a life expectancy of twenty-one years. It took four centuries to double the span of life, but a baby born today has an expectancy of 58 to 60 years. Eighteen years have been added to human life during the twentieth century; forty is not an old age now.

Cancer is increasing in frequency. Some think it is because life has been lengthened. Perhaps so. The morbidity and mortality from infectious diseases have been reduced about 50 per cent and the great epidemics have been wiped out. Education and organized effort have been responsible. Why not apply them to cancer?

In 1921, when Emory University took over the negro division of Grady Hospital more than 33 per cent of the colored babies born there had syphilis. Today, less than 12 per cent of them show a positive Wassermann reaction. More than 1,200 negro babies are born at Grady Hospital annually. This means that the future generation of negroes will be stronger and better able to perform our work, and less liable to become a burden on the taxpayers. This work was accomplished by organization and co-operation.

Two things are necessary to reduce the death rate from cancer: first, an educated public; second, a well trained, earnest medical profession. We must reach the people with a message of hope. Owing to the fact that medical men have neglected the task of popular education the quacks and charlatans have taught the people that cancer is a horrible sore. So firmly has this been implanted in the public mind that we can rarely get one to believe that a cancer really exists until it is too late to effect a cure.

Unfortunately, an early cancer does not cause pain. If it was as painful as the toothache people would quickly seek a doctor; since it is not, they must be taught at what age and in what parts of the body to expect it.

Cancer of the skin is a disease of advanced life. It appears as a scaly spot on exposed surfaces and can be cured in the early stages if properly treated.

In the mouth and on the lip it is more prevalent among older men. It is due to irritation from oral sepsis, excessive use of tobacco, ragged, sharp teeth, etc. It can be prevented or cured if properly treated in its incipiency.

In the digestive tract cancer takes a fearful

toll of life because the early symptoms are obscure and the diagnosis difficult and often made too late. However, if people past 40 years of age would consult a doctor regularly and have a complete examination, many lives could be saved.

Women approaching the change of life should exercise great care of their health. Any unnatural discharge from the womb or a lump in the breast are danger signals. The sentence, "It is just the change of life; let it alone," has created more orphans than all the wars engaged in by the United States since the Declaration of Independence. A single painless lump in the breast is more dangerous to a woman past thirty-five than the bite of a rattlesnake.

If the daily papers carried the account of three women killed every weekday by some "Jack the Ripper," *how soon we would* start a campaign to stop him! But this is just what Cancer the Killer does—and we sit idly by.

Now, remember the following facts:

1. Early cancer seldom causes pain.

2. A cancer is something that can be seen or felt, unless it is in the deep organs, then the x-ray may be made to reveal it.

3. Cancer of the mouth can be prevented.

4. Dysentery that persists may be cancer of the bowels.

5. Any unnatural discharge may be cancer of the womb.

6. A painless lump in the breast should be investigated *at once.*

7. Do not delay—the road to the cemetery is paved with good intentions.

8. See your physician! If he simply says, "There is nothing the matter," without making an examination; or says, "Don't trouble trouble till trouble troubles you," get another doctor and demand a thorough examination. In other words be examined regularly.

From the foregoing discussion I hope you have already reached the following conclusions:

1. That, as cancer is a disease preying largely on women; the campaign of education should be pushed in Georgia so as to give the public the true facts about this dreadful malady.

2. As idiocy, feeblemindedness and some forms of epilepsy are undoubtedly inherited; and a strong predisposition to insanity, alcoholism and criminality is transmitted to the offspring, a bill to compel the sterilization of these human derelicts should be introduced in the legislature with a view to safeguarding society.

3. As marriage is the means of perpetuating the species it should be entered into with due consideration for the health of posterity. The fertilized ovum, having formed an unbroken connecting link between the dawn of creation and the present generation, is the unit from which we have been evolved; possessing, as it does, all of the potentialities of the physical, mental, moral and spiritual characteristics of the individual, it becomes our duty to teach that proper mating and home environment are the best means of producing a race capable of maintaining the democratic principles of our nation and making the world a safe place in which to live.

PIN WORM INFECTION*†

Symptoms, Life History and Removal

M. A. FORT, M.D.†

Bainbridge

When I was in general practice I found very few treatments more unsatisfactory than that for pin worms. I tried all the vermifuges, all the enemata, all the foods recommended, and yet such patients as I heard of again were not cured.

During the last few years I have been greatly impressed by the large number of people who bring children to me because they pass little live worms, which they usually call "Stomach Worms," though some of them think they are hookworms. Heller, aft-

*Read before the Second District Medical Society, Camilla, Ga., October 12, 1928.

†If there is any credit due for this paper, it should be given to Mr. T. F. Sellers, our gifted and erudite Director of Laboratories of the State Board of Health, who detailed for me some of his laboratory observations, and translated from French an exhaustive article by Brumpt from which I have freely quoted. I have contributed my field experience and assembled the matter.

†Commissioner of Health, Decatur County.

er examining a large number of men reports that he found nearly 19 per cent of men, 21 per cent of women, and 34 per cent of children infected. I believe that rate holds in Georgia. The rate of infection is second only to that for hookworms, and in many sections the rate is far higher than the hookworm rate.

Pin worms do not often produce serious symptoms because they do not live by sucking the blood of the host, and even large numbers of them do not produce as much derangement as round worms. But they do produce annoying physical symptoms, and often a degraded feeling and severe psychological manifestations. A physician who fails to remove this infection will be severely criticized by his patient. So let us first examine the symptoms, then the life history of the parasite, and see if we cannot reach a rational treatment.

Symptoms

The first and universal symptom is *pruritus ani.* The heat of the bed and the stillness of the body seem to stimulate the worms to crawl outside. They seem very susceptible to slight elevations of temperature. The anal margin may be congested, red, showing red spots from worm bites, and blood stained mucus. A speculum often shows a similar condition within the rectum. There may be a chronic catarrhal condition of the colon, with streaks of blood and mucus. Sometimes this condition extends to the entire intestinal tract, producing variable appetite, partial anorexia, nausea, vomiting, diarrhoea, and localized intestinal pains. Among nervous troubles may be irritability, melancholia, epilepsy, hysteria, convulsions, chorea, trembling, syncope, vertigo, blindness, buzzing in the ears, deafness, urinary incontinence.

Genital troubles may be erections and erotic dreams, seminal emissions, masturbations, nymphomania and menstrual disorders. Frequently the worms may wander to the vagina, producing intense itching which may stimulate rubbing, masturbation and leucorhoea. Sometimes they enter the cervix and have proceeded up the tubes to the ovaries, there laying eggs and producing cysts. More rarely than round worms they have been found in the esophagus, nose and mouth.

Life History

As to the life history, the eggs are swallowed and hatch in the small intestine. As they grow older they go lower, and are often found in the appendix and cecum. Becoming pregnant, they descend to the rectum, and usually, *probably always,* they come out of the anus at night to lay their eggs. This explains why we so rarely find this egg in stools, considering the general distribution of the infection. We find the eggs, only when they accidentally fall into the stools. Looking at a worm with a low powered microscope, you find her literally packed with thousands of eggs. Sellers relates that while looking at a worm not mounted in water, she seemed to dry out and then explode, scattering a powder over the slide. Focusing on particles of this powder he discovered that each particle was an egg. Remembering these things it is not surprising that the infection so often spreads through entire families. The worms either lay their eggs, or they explode, scattering their eggs over the child, clothing and bedding. The child, either asleep or awake, scratches around the anus, crushing worms and packing thousands of eggs under the finger nails. Uninfected children in the same bed will certainly get eggs on their fingers and convey them to their mouths. If a child has a nail biting or thumb sucking habit, he soon becomes intensely infected.

In addition to this direct reinfection, stools containing pregnant worms, if deposited on the ground will infect the ground, the dust, the premises. The same old typhoid trinity of "flies, food, fingers," obtains here. In some of these ways reinfection constantly goes on. So if we remove the adult worm from the lower intestine, there is usually a litter of young ones in the upper intestine, the child has new eggs under his finger nails and on his hands, he is constantly being reinfected and comes back to the doctor saying he is not cured. Children would be overwhelmed by this infection if it were not that with nearly every stool some worms are lost. Some come out at night and never get back, and any purgative brings out large numbers

of them. Any treatment for these worms must depend more on prevention of reinfection than upon removal. If there were no reinfection, nature herself would probably remove all the worms in a few weeks or months.

The Question of Treatment

Vermifuges recommended are santonin and calomel, oil chenopodium and a purgative, or a purgative alone. All of them seem to work, for you will get many worms with anything that flushes the bowels. Dr. Holt recommended eating garlic, and flushing the bowels with a decoction containing garlic. Enemas containing quassia, boric acid, salt, and most of the other drugs in the pharmacopoeia have been suggested. But most authorities close the discussion by admitting that the treatment is often disappointing.

A successful treatment then must

(1) Remove the worms.

(2) Prevent reinfection.

DeRivas has shown that this worm, and in fact most other intestinal parasites cannot stand high temperatures. He details a number of case histories showing that if from half pint to a quart of saline solution, temperature from 115 to 117 F. is injected into the rectum and retained for from 10 to 15 minutes, all adult worms in the lower bowel will be passed out dead. The hot solution may not pass very high up the bowel, but probably heat enough is conducted to the lower intestines to paralyze or kill the worms, even further than the solution reaches. Many times he got no worms after the first injection, and never after the third. Parenthetically I may say that he claims rapid improvement and cure of amebic dysentery in this way, and also removal of all hookworms by duodenal irrigation with the warm solution.

So, assembling the information here recorded, I compiled a treatment which I will here detail:

Mary J., 5 years old, has had pin worms for several years. Worms usually seen in the stools in numbers, both with and without purgation. Several treatments for hookworms and a number of treatments with patent vermifuges failed.

I gave her 2 grains of calomel at night, followed by salts in the morning. Had her bathed, bedding and gown changed, annointed around the anus with diluted mercurial ointment, hoping this would destroy the worms and eggs when they emerged. Next morning I picked out 68 living worms from the stools. This might have been half of them. Then she was placed on her right side, a rectal tube was inserted and a half pint of saline solution, as hot as the elbow could stand it, was allowed to run in, and she was forced to retain this for 12 minutes. When it returned it brought 5 adult worms, all dead. Her fingernails were scrubbed with hot water and soap, with a nail brush. I left the mother with instructions to clean and scrub the hands and nails every morning, to change clothing and bedding frequently, to take complete hot bath daily and to annoint with mercurial ointment as directed.

One week later she was given another purgative and hot enema, but we were unable to find even one worm by washing the stools in a wire cloth strainer.

That was six months ago, and the intelligent mother reports no worms at all though constantly looked for.

That is the only case in which I have been able to go to the house and carry out the entire program personally. But I have detailed the plan to a number of mothers, and all who have reported declare that there has been complete eradication in every case.

This is not evidence enough to state positively that the method is perfect in every case, but it is believed that it points the way to a certain cure of an infection that we have been failing to remove heretofore.

To Recapitulate

Pin worm eggs are swallowed and hatch in the upper bowel.

As they grow older, they make their way to the rectum, and pass out at night to lay their eggs. Many do not find their way back, but are crushed or explode, scattering numberless eggs. Many of these eggs are acquired by the children on their hands or under their finger nails, from which the children are constantly reinfected. The removal of the worms is comparatively easy, with purgatives, vermifuges and hot saline enemas. But the true cure is the prevention of reinfection by strict and constant toilet of the hands and fingers, body, clothing and bedding.

NEUROLOGICAL DISEASES

Underlying Factors Influencing the Treatment of Certain Cases

J. CALVIN WEAVER, M.D.
Atlanta

In a comparatively recent article by Harvey Cushing is the statement that Leonardo, in a moment of self communing, wrote in his note book: "The supreme misfortune is when theory outstrips performance."

The fact that treatment has apparently been brushed aside during the last decade in a mad rush for a new sign or symptom, or for some obscure disease, has prompted a consideration of this phase of medicine in the spirit of William Harvey, who said, "I claim that liberty, which I willingly yield to others, the permission to put forward as true, such things as appear to be probable, until proved to be manifestly false."

Treatment is referred to in its bigger and broader sense and takes for granted an understanding of the gross pathology, a correct evaluation of the physical signs and laboratory findings, a true conception of the cause and nature of the derangement, and the ability to apply the most effective measures for relief.

In the final analysis, our real mission in the medical world is the relief, or cure, of those who come seeking aid, regardless of whether or not we know to a scientific, mathematical certainty the why or the wherefore of a given chain of symptoms or the cure.

Many things may be implied under "Treatment," but none perhaps more important or of more influence than that mentioned by Hilton years ago as "Natural Therapeutics." He particularly referred to Rest —both Physiological and Mechanical. Many different treatments encompass the former, and the latter alone frequently brings about a cure.

Another factor of particular interest, not only to the neurologist, but to the internist as well, is the Effects of Disturbances of Inorganic Environment." To James Blake, of England, who located in St. Louis, Mo., 1847, and migrated to California the next year following a local epidemic of cholera, we are indebted for the foundation of our present knowledge of the relations between atomic weights of metals and their physiological action. He showed that the greater the atomic weight, the greater the physiological action; also that the monovalent metals, sodium, calcium, lithium and silver, agree exactly with one another in their qualitative physiological action; and by his inquiries into the effects of inorganic salts when injected into the circulation, brought about the discovery of the anesthetic action of magnesium sulphate.

Ringer demonstrated that the inorganic salts which form the normal constituents of the environment of cells, may under certain circumstances act as protoplasmic poison, and later showed while pure sodium chloride is definitely toxic for living tissue, its toxic properties are antagonized by a correct admixture of potassium and calcium salts. In nerve or muscle tissues, the toxic action of all the inorganic salts manifests itself by an initial increase in irritability, followed eventually by an exhaustion which manifests itself in a more or less rapid decrease and final loss of irritability.

Probably to Schussler, of Germany, more than any other, are we indebted for the foundation of Biological Chemistry, along which line medicine is destined to make the greatest strides. In his little monograph on "Biochemic Method of Treating Disease" he advances the theory that the condition of the cell is responsible for the gross pathology: that every cell works, not by deliberate instruction, but as a part of a specialized life.

Some biologists believe that all cells would live forever if placed and kept under proper conditions. As expressed by Wiggam, germ cells and body cells under proper physical and chemical conditions are potentially immortal."

Several factors influence the "Inorganic Environment," such as the heriditary disposition of the cell itself, the selective affinity of cells for the principal salts, and the effects of toxins on cells and different types

of tissues. It has been shown that in living tissue the exact composition of the inorganic milieu or environment is definitely related to the welfare, and can depart little from normality without inducing disturbances of permeability, and that the relative proportions of the various inorganic constituents of the protoplasm do not conform to the existing proportion in the medium which they inhabit. The living cell often possesses a different composition from its environment with which it is in constant osmotic interchange of water and dissolved substances. For example, the red corpuscles and skeletal muscles though bathed in fluids which contain a marked excess of sodium over potassium, nevertheless in themselves show a marked selective action in that they contain a great excess of potassium over sodium. As stated by Loeb, I think we may take it for granted that at least potassium forms a non-dissociable constituent of the protoplasm of a number of tissues. As a striking illustration of selective affinity of cells is the thyroid, the only tissue in the body normally containing iodine.

To conserve our functions and to prevent injuries, nature has made wonderful provision, as shown by Hilton, by providing protection to every organ in the body in the nature of a strong membrane which provides physiological rest after each period of turgescence. His efforts to demonstrate this function of the dura of the spinal cord was probably the first demonstration of the principle underlying the Queckenstedt test for spinal cord obstructions. It is peculiarly interesting that the brain and spinal cord, the system least capable of caring for itself, should be doubly protected; first by a strong membranous covering, the dura, the strongest in the body, then the bony encasement comprising the skull and spinal column; the former to bring about physiological rest following periods of congestion, the latter affording protection from violence without. She has gone even further, by providing a waterbed, or cushion, to act as a snubber in case of concussion, and at the same time placing the choroid plexus on the double duty of secreting fluid for the waterbed and guarding that particular port of entry to the brain from bacterial invasion. So well has this barrier from bacterial invasion been arranged for that it militates against appropriate treatment once the central nervous system has been invaded. As an example, it has been shown that bile pigment, in even the severest cases of jaundice following acute yellow atrophy, though staining all of the other fluids of the system, had not penetrated the central nervous system. What is true of icteric pigment, is in the main true of various drugs. It seems the irony of fate that antisyphilitic drugs, such as arsenic, mercury and bismuth, should all be heavy metals with large molecules that have great difficulty in reaching the central nervous system. Though this walling off of the nervous system suffices as a barrier in many syphilitic infections, it acts also as a barrier to the much needed treatment in others.

Flexner has shown by animal experiments that some procedure must be instituted to break down the barrier, if effectual medication be expected to reach the brain; otherwise, intravenous treatment would in many cases be of no avail.

As wonderful as the gross structure may seem, as regards conservation of energy, still more remarkable is the control of normal function, as well as reserve force, which we know as the "law of fluctuation," or alternating periods of activity and rest in living tissues.

From experiments made at the St. Andrews Institute for Clinical Research, it has been demonstrated that the units which make up the structure of different tissues, particularly nerve and muscle tissue, show alternating periods of activity, and quiescence. As a sequel to this is the law of "all or nothing," by which Lucas showed that the units of tissue vary between complete activity and complete rest, and that the activity of an organ as a whole is graded by the number of units brought into play at one time.

Thus all parts of an organ take their share in rotation of the work to be done, the periods of rest prevent undue fatigue, and a large reserve of units is left to meet excessive calls; units that can be brought into action

simultaneously and that have not suffered from long periods of disuse.

Though many wise provisions for the economy of energy have been made, there are many destructive agents to be combatted, such as parasitic organisms, toxins and senescence.

It is an established fact that certain bacteria produce soluble poisons which produce an irritation in some cases; in others a destruction of cell life in the aggregate. No doubt many manifestations of ill health are due to toxins acting upon different parts of the nervous system. Analogous to the irritation of toxins is the upset of the ratio of different salts which have a mutual antagonism. This originates in the property of the protoplasm, and though it can be shown in many salts, the most practical illustration from a neurological standpoint is the sodium-calcium ratio as worked out by Loeb, as it can be given a practical application in treatment of certain neurological conditions.

Biederman showed that solutions of sodium salts caused rhythmical contractions of skeletal muscles and that the stimulus originated in muscle tissue. As addition of traces of soluble calcium salts results in prompt suppression of contractions, it is evident that calcium is necessary to antagonize the abnormality of function which manifests itself in hyperirritability of nerve tissue caused by excess of sodium.

It has been shown that calcium precipitants are without effect when placed upon the surface of the motor area of the cerebrum, but immediately induce convulsions when they penetrate by diffusion, or injection, to the underlying white fibres. Without the five principal cell salts; viz., potassium, sodium, magnesium, calcium and iron, the armamentarium of the present day neurologist would be badly crippled. Calcium potassium and albumin play a great part in the production of fibrin in the blood, while its solubility and diffussion depend upon potassium. Salts of potassium help regulate cardiac activity and increase the output of sodium in the urine. Potassium phosphate is the salt on which all nervous energy depends. In nervous breakdowns, such as hysteria, chorea, delirium tremens, brain fag and neurasthenic manifestations, attended by melancholia, anxiety, insomnia and fainting, the supply of potassium and magnesium is perhaps exhausted.

The statement has been ventured by one enthusiast that if potassium phosphate, and its fellow worker magnesium phosphate, were used judiciously by physicians, the rate of insanity could be reduced 40 per cent. The reaction of the brain to nervous stimuli depends greatly on the salts of potassium and magnesium, so perfect oxidation depends as much on them as on iron. Magnesium phosphate is the chief element in nerve fibres, and a deficiency of this salt will affecct the poise between motor and sensory nerve fibres.

Calcium has been referred to as the master salt of elastic tissue. A glance at the literature would almost stamp it as a cure all. There is no gainsaying the fact that it is a wonderful medicine. The roles that it plays in the body politic are legion. It is the chief salt in the cell skin, and upon it cell structure largely depends. It controls the elasticity of muscular and connective tissue, and furnishes 57 per cent of the material for the bony framework of the body. It affects the diffusibility of albumen, helps to hold it, as well as various salts, in solution. This salt increases the viscidity of the blood and reduces the coagulation time. It regulates the heart action, and as pointed out by Loeb it is only the calcium in our blood and tissue fluids, which prevents all our skeletal muscles from beating rhythmically like the heart. It stimulates all glandular activity and increases the phagocytic effects of the leucocytes.

It is useless to mention the depleting effect of magnesium sulphate in edema of the brain of traumatic origin, and its sedative action in convulsions.

As a practical illustration of physiological and mechanical rest, is the management of that unfortunate, but rather common, condition which we know as Erb's Palsy, or Obstetric Brachial Paralysis. Damage to the different cervical nerves forming the brachial plexus is brought about by traction on the arm. The arm assumes the typical "policeman's tip" position, adduction and internal

rotation, slightly flexed elbow, forearm pronated and palm looking backward.

Early conservative treatment often gives perfect recovery. Place the arm in a comfortable position to prevent the unparalyzed muscles from becoming contracted. Place in a plaster cast or aeroplane splint, the shoulder abducted or raised upward and rotated outward, forearm supinated, elbow flexed and wrist dorsiflexed. The earlier the support the better. This should be kept on three weeks, followed by daily massage and active motion.

Illustrating the "Effects of Disturbances of Inorganic Environment" is the familiar condition known as tetany.

The tetany of childhood frequently results from an alkalosis which changes the calcium content. To correct this it is necessary to bring about an acidotic change in metabolism. This can be accomplished by giving 3 to 6 grams daily of a 10 per cent solution of ammonium chloride in milk. As in animals in which calcium and the inorganic phosphorus are low in the serum, cod liver oil causes both to rise to a normal level, thereby establishing equilibrium, phosphorus and cod liver oil seem indicated.

An example of "The Mutual Antagonism of Inorganic Salts," particularly the Sodium-Calcium ratio, is that minor form of tetany, extremely painful, cramp in the extremities. This is quickly relieved by calcium chloride, 10 grains three times a day. Other conditions helped by calcium is the serum rash in the form of erythematous urticaria following antitoxines, also the postinfluenza-pneumonia complications manifesting themselves in irritation of the pyramidal and extra pyramidal tracts, and the vague residual pains in many cases of neuro-syphillis.

In a review of a series of cases of arterial hypertension treated with calcium and potassium chlorides, by Addison & Clark, of Toronto, Canada, they found that 70 per cent reacted favorably to calcium or potassium. There was a decided fall in blood pressure, while the edema improved and disappeared after persisting three or four weeks in the treatment.

(Continued on Page 126)

EPILEPSY*

Remarks On the Cause

WILLIAM A. SMITH, M.D.
Atlanta

Although known from antiquity and the should be included under this term; Collier states that migraine, pyknolepsy, vaso-vagal attacks, tetanic and syncopal attacks are all essentially of the same nature. Most important is the work of Patrick on what he terms pre-epileptic phenomena, consisting of sudden paroxysmal seizures of many types, such as pallor, dizziness, sense of thirst, sense of asphyxia, tinnitus, shivering, sudden screaming or laughter. In regard to the etiology and neurologic mechanism of the attacks, we know still less. Epilepsy is still considered by some as being of two types, symptomatic and idiopathic or essential. The term essential epilepsy is a misnomer for two reasons: First, because it is inconceivable that the condition exist without cause; second, because it is becoming more and more probable that the hidden cause, or essential element is present in all cases. Recognizing the numerous conditions under which periodic convulsions occur, it has been proposed to discard the term epilepsy, and to speak of these conditions as "paroxysmal disorders," of known or unknown cause. I feel however, that this movement will be unsuccessful, and that the term properly understood, may well be retained.

It is rather interesting that although recognizing that epilepsy is but a symptom which may be associated with many conditions, the present trend of thought is directed toward a common fundamental etiologic factor which may be present in all cases. It is this which I will discuss briefly in this paper. This basic or predisposing factor may be present in various degrees—sufficient in itself to cause the symptoms, or requiring additional precipitating factors. The predisposition to convulsive seizures is apparently most marked in infancy, puberty and in the

*Read before the meeting of the Atlanta Neurological Society, Atlanta, Georgia. January 25, 1929.

involutional period, as well as in the transitions between sleep and the waking-state. Given this fundamental basis, many factors may precipitate attacks, and different factors at different times in a single case. Foerster thus reports several cases of this type: A case of cerebral cysticercosis, with attacks appearing only after a head injury; the attacks later ceased, and reappeared following alcoholic abuse. A second case of luetic epilepsy, in which attacks ceased, to recur on abuse of alcohol, ceasing on abstinence from alcohol, and reappearing following a head injury. A third case, in which attacks followed a head injury, an endothelioma being found at operation; attacks ceased following operation, but appeared years later in association with chronic nephritis. Again, the precipitating factors which initiated the convulsions may have ceased to act, but the seizures be repeated —what is termed the epileptic habit. The analysis of the etiologic factors in any given case are thus very difficult. I doubt if we are often justified in speaking of the cause of epilepsy in any given case; it seems better to speak of associated conditions.

There are at present five main conceptions as to the fundamental basis of epilepsy:

1. That epilepsy is based on a hereditary susceptibility. Epilepsy as a direct inheritance is rare, except as associated with feeble-mindedness, and it is the latter which is inherited. In 607 cases of epilepsy, N. R. Smith found a history of convulsions in one or both parents in only 2.4 per cent. Burr in 1,449 cases, found the occurrence to be 2.3 per cent. Thom reported that of 138 cases of epilepsy, the offspring had repeated convulsions in only 1.8 per cent. It is possible that the existence in the family of other nervous disorders besides epilepsy is of importance.

Barrett states that hereditary relations are important in epilepsy; there is a marked predominance of nervous diseases among the antecedents of epileptics, which is more frequent that in the case of persons with psychoses. Alcoholism occurred among the antecedents of epileptics more frequently than among those of patients with psychoses. Most of such statistics however, are based on institutional cases, and not those which are seen in private practice. It would seem that too much emphasis on the hereditary aspect would stifle investigations that are so urgently needed today for the solution of the problem of epilepsy. However, it is possible that constitutional studies, which are becoming so important in medicine and psychiatry, may reveal something of value.

2. That epilepsy is a psychic regression of an inadequate personality, in response to the stress of life situations. This theory, sponsored by Clarke, is drawing increasing attention. A few cases have been reported in which psychological mechanisms seemed related to the convulsions. However, Wilson states that the term "psychic" as applied to epilepsy is merely a verbal expression, and gives no insight into the physiological mechanism. That a fundamental disorder of the personality could produce the condition called epilepsy is not necessarily impossible, although we do not understand the underlying physiological basis. It is to be expected that epileptics show a disordered personality. Notkin has shown that this disorder depends on the age of onset of the convulsions, an epileptoid personality developing in those with onset early in life. I do not believe that we realize how terrible an affliction it is to be subject to convulsive seizures at any time, and I wonder such patients have the courage to face life at all. The organic neurologist is inclined to be skeptical of a psychic basis of epilepsy, and as Kennedy has stated in speaking of nocturnal epilepsy: "Why should a patient regress from sleep to coma in a fit of self-hatred?" It is frequently difficult to separate hysterical and epileptic seizures; both may occur in the same patient.

We must also not forget the possibility that the personality changes are due to the same cause as the convulsive seizures. That marked disorders of the personality may be due to organic changes in the brain is well known as in brain tumor, syphillis, chronic encephalitis, etc.

3. That epilepsy is always an indication of organic disease of the brain. I know of no organic disease of the brain which may

not be associated with repeated convulsions. Epilepsy may exist for years without other sign of a brain disease. I have long considered that unrecognized birth hemorrhage in the brain, and unrecognized infantile encephalitis is the most common cause of epilepsy in the so-called essential cases. It is well known that birth hemorrhage in the brain may be a symptomatic, and the same is true of mild encephalitis accompanying the acute infectious diseases of childhood. Pierre Marie emphasizes these two factors in the etiology of epilepsy, which he considers a brain disease. Green in 1,000 cases, found that 24 per cent were first born, in which birth injury is most likely to occur. The brain changes described by Dandy and others, consisting of arachnitis, dilated subarachnoid spaces, and unilateral or bilateral hydrocephalus lend support to this theory; however, it is possible that such changes are the result and not the cause of the seizures.

It is striking that epilepsy occurs so infrequently in cases of known organic disease of the brain. Of 613 cases of head injury, Reichmann found that epilepsy developed in 23 or 3.7 per cent; Wagstaffe reported that of 820 cases of gunshot wound of the head, epilepsy developed in less than 10 per cent. Collier states that epilepsy occurs in multiple sclerosis only in the proportion of one to five hundred, and only in 4 per cent of brain wounds. Although he states that epilepsy occurs only in 10 per cent of cases of brain tumor, in our own series of 100 cases, it occurred in 39 per cent. Convulsions may occur with tumors of all locations in the brain, although only tonic seizures were present in the cerebellar cases of our series. Convulsions occurred equally frequent whether the tumor was meningeal, cortical or subcortical; they did not seem to depend on the degree of increased intracranial pressure, as judged by choked disc; the rarity of convulsions in posterior fossa tumors, in which the pressure is usually very high, indicates that the pressure alone does not cause the convulsions. The mechanism of production of convulsions in organic diseases of the brain will be discussed further under the vascular theory. Certainly, the importance of organic disease of the brain in the production of epilepsy must never be forgotten.

It has been shown experimentally by Elsberg, that increasing the intracranial pressure increases the susceptibility of an animal to absinthe, a convulsant drug, and the same fact has been shown by Dandy in experimental lesions of the cortex. Collier states that no brain lesions of any kind at any point will certainly cause epilepsy, that epilepsy is never truly a brain disease, and that we must search for another factor. As neurologists, we must not allow our vision to be narrowed to the brain, and forget the tremendous influence of other organs and humoral factors on the brain. Is it possible, that the brain disease which is present in many cases merely increases the tendency to convulsions in an individual who is susceptible by reason of some other basic factor?

4. That epilepsy is based on a circulatory change in the brain, a vascular spasm. The frequency of convulsive seizures with circulatory disorders is well known. The attacks occurring in organic diseases of the brain are said to be produced by vascular disorders, which is a logical explanation. The phenomena of an epileptic attack are probably better explained on the basis of vascular spasm than on any other basis. The pathologic findings in the brain in cases of epilepsy, in particular the sclerosis of the cerebellum and Ammon's horn, are explained by Spielmeyer on the basis of vascular spasm in areas of poor blood supply.

It is certain that vascular changes in the brain occur in every epileptic seizure. It is also recognized today, that the cerebral vessels have a definite vasomotor innervation. Foerster has described the vascular changes which he has observed "at least a hundred times" during a convulsion.

There is first a pre-paroxysmal vasoconstriction, pallor and shrinking of the brain with a fall in cerebral fluid pressure; there then follows, a venous stasis, with swelling of the brain, which becomes bluish-violet in color, and a rise in cerebral fluid pressure above normal. Whether this vascular spasm is a cause, or a part of the attack is questionable. That an arterial spasm would

cause complex chemical changes in the brain tissue is clear; local anoxemia in itself might be sufficient to cause the convulsion. Since the vascular spasm might be produced by toxins, and in turn produces toxic changes in the brain, it is closely related to the toxic theory, and will be discussed further below. I would like to point out, however, the rarity of arterial spasms in other parts of the body in epileptics; why are the cerebral vessels alone subject to such spasms? Also, why does it recur?

5. That epilepsy is always a toxic condition. This theory has existed since the earliest times, and again is flourishing with renewed vigor. Endogenous and exogenous toxins are probably the best known factors producing convulsions. I cannot discuss all of the toxic theories. Concerning the endocrine basis of epilepsy, we know very little. In relation with vascular spasms, the theory of anaphylaxis is attractive; however, the presence of other allergic phenomena in epileptics is rare, and I fail to find a history of familial allergy in my cases. Why is not epilepsy frequent in cases of known allergy? Collier and Peterman believe that epilepsy is a metabolic disorder. Muskens also believes that the cause of epilepsy is some toxin. I shall discuss only the theory that epilepsy is due to a disturbance of the acid-base relationship in the body. There have been reports in the literature that this relationship in epileptics is unstable, and that preceeding attacks, there is a tendency to an alkalosis, and that following attacks there is a tendency to an acidosis. There have also been reports of marked daily variation in acid excretion, as in the saliva and urine of epileptics. Collier states that a periodic metabolic disturbance exists in all epileptics; he cites cases of status, which sometimes die, even though the convulsions cease, and in which autopsy always shows a fatty degeneration of the heart. He even states that bromides and luminal are effective, not because they are sedatives but because they correct the metabolic disorders.

Numerous biochemical investigations have been made on epileptics; in such work one must be careful not to confuse the biochemical changes produced in the attack, with those that might have etiological significance. The following findings have been reported between attacks: On the blood—normal nonprotein nitrogen, normal urea nitrogen, normal amino-acid nitrogen, normal uric acid, normal creatinine; normal hydrogen-ion concentration; normal calcium, normal phosphorus, normal cholesterol, normal blood sugar, normal glucose tolerance curve. On the spinal fluid, there has been reported normal spinal fluid pressure, normal hydrogen-ion concentration, normal cell count and albumin, normal chloride, normal urea, normal calcium, normal phosphorus, normal impermeability to potassium iodide and sodium nitrate. The basal metabolism is normal. Lennox has reported a high fibrin content of the blood, and Osnato has reported a high lactic acid content of both the blood and spinal fluid; the significance of these findings is uncertain. In reference to the acid-base disorder, Rafflin states that the ammonia nitrogen of the urine is opposed to the hydrogen-ion concentration, so that when multiplied, the result is constant; he found that in epileptics, this constant remains unchanged.

Cuneo believes that in epilepsy there is a disordered carbohydrate metabolism, due to insufficient amylolytic ferments; as a result, organic acids accumulate in the blood and are excreted unchanged in the urine. As a result of this acid-intoxication, nucleohistone bodies are broken up into nucleinic acid and a toxic proteose, which he has isolated following attacks. A high carbohydrate diet aggravates the condition, while a low carbohydrate diet and high protein diet is beneficial. This theory is of interest in connection with the use of the ketogenic diet.

Wuth has analyzed the metabolic disorders in an epileptic attack. Some of these changes occur 2-3 days before the attack and he believes that they are the first signs of an attack, which may abort; in the latter case, they are to be considered as serological equivalents. These consist of changes in the blood and urine composition, probably due to a vascular disorder of the kidneys. There is oliguria, and retention of nitrogen products, followed after the attack by polyuria and increased excretion of nitrogenous products.

This explains the changes in nitrogen balance associated with attacks. During attacks, it is said that there is an eosinopenia and a polymorphonuclear leucocytosis. There are also changes in the acid-base relationship, carbohydrate metabolism and ionic and colloid relationships.

Considering the metabolic disorders known to be capable of producing convulsions, Wuth states that all can be reduced to one of two common factors. The first factor is a vascular change in the brain, which produces a metabolic change in the brain cells. Some of the disorders of this type are various poisons, lead, heart disorders, eclampsia, pseudo-uremia, fevers, vegetative nervous disturbances, endocrine disorders and arteriosclerosis. The second factor is a change in the acid-base relationship; such is produced by pyloro-spasm, hyperventilation, comas, various intoxications and fevers. These two factors of vascular spasm and disordered acid-base relationship are mutually inter-related; both lead to acid-base disorders in the brain cells. The acid-base disturbance is considered as an indicator of obscure processes. Wuth thus believes that the ultimate cause of the convulsion lies in a disturbance of cell metabolism. Cobb also believes that the best conception of epilepsy is that it is due to some sudden change within many cells of the nervous system.

Considering the acid-base theory, one might ask why the disorder is periodic, which is unlike other metabolic disorders. Why does the individual remain free of attacks, often for prolonged periods? Muskens believes that the attack detoxicates the individual. It is conceivable that this might occur in a major convulsion, but improbable in a minor attack of momentary unconsciousness. If a constant toxemia, it would not seem that the nerve cells would remain refractory to the toxin for months, when the brain cells receive and react to other stimuli in a normal manner.

Fasting and the ketogenic diet as a method of treatment are based somewhat on the metabolic theory of the condition. Some believe that these methods are effective through correction of an acid-base disturbance, others that they act as a sedative. Acidosis alone, as by the administration of acid-forming salts seems to be of no benefit. The metabolic changes produced by fasting and by the ketogenic diet are similar. There is produced a lowering of the blood sugar, a slight decrease in the carbon-dioxide combining power of the blood, slight fall in alkali reserve of the blood, increased uric acid and marked increase in ketone bodies in the blood and urine. Calcium, phosphorus and chlorides show little change. The degree of ketosis seems definitely related to the improvement in symptoms obtained. In addition, there is a definite change in carbohydrate metabolism, the fasting level is lower than normal, and the glucose tolerance curve shows a delayed rise which is higher than normal, and a delayed fall. This change in carbohydrate metabolism may be an important factor. Conclusions: The main conceptions of a fundamental basis of epilepsy have been briefly reviewed, and each is seen to contain much of merit. They are not mutually exclusive, but are inter-related; thus, an organic disease of the brain may cause vascular changes, which in turn produces toxic disorders in the cells of the brain. It would seem that a vascular spasm is always the immediate precursor of an epileptic convulsion; why it occurs, and why it is repeated is not always clear. We must still consider epilepsy as a reaction of the nervous system to factors of many different types, that is, a symptom. This viewpoint however is unsatisfactory.

REFERENCES

1. Collier, J.—"Epilepsy," Lumleian Lectures. Lance J. 1:587, March 24, 1928. 1:642, March 31, 1928. 1:687, April 7, 1928.
2. Levy, D. M., and Patrick, H. T.—"Recurrent 'Attacks' Other Than Migraine and Infantile Convulsions Preceding 'True' Epilepsy." Arch Neurol. and Psych. 20:443, Sept., 1928.
3. Foerster, O.—"The Pathogenesis of Epileptic Convulsions." Deut. Zeit. f. Nervenheilk. 94:15. 1926.
4. Smith, N. R.—"Will Sterilization Decrease Epilepsy?" Jour. Mich. State Med. Soc. Sept., 1925.
5. Burr, C. W.—"Heredity in Epilepsy." Arch. Neurol. and Psych. 7:721, 1922.
6. Thom, D. A.—"The Frequency of Epilepsy in the Offspring of Epileptics." Bost. Med. and Surg. Journ. 174:573. April 20, 1916.
7. Barrett, A. M.—"Hereditary and Family Factors in the Development of The Psychoses." Arch. Neurol. and Psych. 13:1. January, 1925.
8. Clarke, L. P.—"Some Therapeutic Suggestions Derived from the Newer Psychological Studies Upon the Nature of Essential Epilepsy." Med. Rec. Mar. 4, 1916.
9. Wilson, S. A. K.—"The Epilepsies." Brit. Med. Journ. 2:1, July 3, 1926.
10. Notkin, J.—"Is There an Epileptic Personality?" Arch. Neurol. and Psych. 20:799. Oct., 1928.
11. Kennedy, F.—"Epilepsy and The Convulsant State." Arch. Neurol. and Psych. 9:567. May, 1923.
12. Marie, P.—Presse Med. 36:81. Jan. 21, 1928.

(Continued on Page 129)

ASTHMA IN CHILDREN*

Diagnosis and Treatment

Report of Seventy-Two Cases

HAL M. DAVISON, M.D.,
Atlanta

The diagnosis and treatment of asthma in children is essentially the same as that in adults. A thorough history is always obtained and care is taken to ask especially about idiosyncrasies to foods and drugs. History is of little practical value unless the mother has observed actually repeated reactions caused by contact with some definite substance or substances. Nearly all mothers think that milk or eggs have affected their child, and, in addition, have more or less fallacious ideas about the effect of other agents such as colds, climate, localities, foods, constipation, acidosis, etc.

Following the history, a thorough physical examination is made, and then the skin tests are begun. When the patient is a small child, the laboratory work and x-ray examination, consisting of complete blood count, malarial hunt, Wasserman, stool examination, urinalysis, examination of the sputum, and x-ray of the chest, are left until the last, since they hurt, frighten, and antagonize the child. Success in treating asthma in children depends almost entirely upon securing the proper cooperation from both the patient and the parents. This is best obtained by making friends with the child. We have had marked resistance from very few patients and have tested practically every patient with all the allergins we use. We always begin with the cutaneous tests, since they are not dangerous and children do not dread them as much as the intracutaneous. As a rule, on the first day the patient is brought to the office, tests are explained and some scratches made on our own arm to show the patient that they do not hurt much and then one to six tests—seldom more on the first day—are placed upon the child's arm. Following this, the child is interested in something in the office and given something that he wants and promised something else the next time he comes back. Most children like very much the little bottles that the allergins are put up in and giving them these seems to make them dread the tests less.

After two or three visits, the child is usually receiving thirty to sixty tests at a sitting without fussing, without being held, and apparently without dreading it very much. The results of the cutaneous tests indicates the patient's reactivity and also the approximate danger to be undergone in giving the intracutaneous tests with liquid allergins. Care must be taken not to give too many of these tests at one time and not to use allergens that are too strong, or constitutional reactions may develop. These are, at times, dangerous to the life of the patient.

If, for any reason, the child himself cannot be tested, blood serum from the child may be injected into the blood of some other person and the same tests done upon the skin around the area injected. This reaction has been definitely demonstrated by Cooke, Coca, and their assistants.

The methods of testing and reading results have been fully discussed and are the same in all patients. It is well for the mother to watch the results of the tests and see the reactions. After this, it is usually easier to convince her of the importance of preventing contact with all substances giving these reactions. It has been very hard to get parents to understand this necessity, and detailed instructions should always be given in writing. For instance, in the case of a child reacting to feathers, all feathers should be removed from the house, not just from the bed the child sleeps on. In many cases, the mother will be told not to give the child milk, but she will give it butter, cream and foods cooked with milk. We have one patient that cannot take even a cracker that contains the smallest amount of butter.

The same thing is true of eggs. Many mothers will take for granted that the child can eat cooked egg or egg that is mixed with other food where they cannot take it in the form of raw egg or boiled egg. It is true

*Read before the Seventh District Medical Society, Rome, Ga., September 26, 1928.

that some patients can take an egg that is thoroughly cooked, but cannot take it partially cooked or raw. This is due to the fact that they are not sensitive to ovomucoid, a proteid occurring in egg white that is not altered by any amount of heat. When positive tests are obtained to ovomucoid, eggs should not be given in any form.

Wheat is another product that is very hard to eliminate thoroughly from the diet. We must call attention to the fact that wheat and wheat products occur in many different articles of food; it is well to mention the different breakfast foods, rye bread (35 per cent wheat flour), thickenings, soups, gravies, and any other substances that contain wheat in the smallest amount.

If the patient be sensitive to food substances only, the only treatment that is necessary is to remove these substances from the diet. Such a limitation of sensitiveness seldom occurs and, as a rule, we find sensitization to both inhalants and foods. If the patient can be removed from contact with inhalants, it will, of course, be unnecessary to treat with these substances. In most cases, it is impossible to prevent contact with inhalants and treatments by injection of extract is necessary. Great care must be taken not to begin with too strong an extract, and to keep the patient taking treatment until sufficient immunization is produced. Any general disorder found in going over the patient is, of course, treated as necessary.

In addition to the specific treatment as mentioned, the mother is instructed in caring for the patient's diet. In general, the best diet for the asthmatic is one that is simply prepared. Koch, of England, relieved some cases by diet that were not relieved by other treatment. No greasy or fried foods should be allowed, but butter may be mixed with food after it is cooked. All seasonings, stimulating foods, and foods that are cooked together, should be avoided. No solid food should be taken during an acute attack. While the patient is still "threatened" with asthma, even though not actually suffering from an acute attack, the last meal for the day should be given around 3 o'clock. After this time, water and fruit juices may be allowed but no solid or semi-solid food, such as milk, toast, etc. It is also wise to see that the bowels move well every day.

As to medicinal treatment, some modification of the following has given us the best results: Ephedrin is used in children just as in adults; some children will tolerate larger doses than some adults. We usually begin with 1-8 grain and increase this to 3-8 grain, if the child is not made too nervous. This dose is given three times a day and bedtime until the asthma is under control, then twice a day and bedtime, once a day and bedtime, and then bedtime only for a few nights. If the patient is made very nervous by the ephedrin, or if insomnia results from its use, 1-2 to 1 tablet of aymtal is used to counteract this effect.

Sodium iodide may be given intravenously if the child is old enough. Doses of 15 to 30 grains will be taken without any untoward effect. The following prescription by mouth has given us the best results: Ammonium chloride, 10 to 20 grains; syr. ipecac, drs. 1-2 to 1 1-2; potassium iodide, drs. 1-2 to 1 1-2; chloretone, grains 10 to 30; codeine sulphate, grains 1 to 6; apomorphine hydrochloride, grains 1-20 to 1-5; in some suitable menstruum, sq. to 4 ounces. As the patient improves, all the ingredients except the potassium iodide are gradually omitted and this is increased 1-2 to 1 dr. each time the prescription is changed.

Fowler's solution is added in appropriate dosage and the patient is kept upon this prescription until the tolerance for potassium iodide is reached. Some cases will tolerate up to 12 to 13 dr. of the saturated solution in four ounces of mixture.

Case Reports

It will probably be of interest to discuss the actual cases that we have had in children. Out of 642 immunological cases that we have seen from 1921 through 1927, 72 cases have been children between the ages of one and twelve, who suffered with asthma. Their respective ages have been as follows:

1 year	2 cases	7 years	7 cases
2 years	3 cases	8 years	14 cases
3 years	6 cases	9 years	7 cases
4 years	6 cases	10 years	8 cases
5 years	6 cases	11 years	4 cases
6 years	6 cases	12 years	3 cases

(Continued on Page 137)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

MARCH, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

CANCER CONTROL

The revival spirit in cancer control has subsided, but the routine work as a whole has not. The pace has only slackened and the method changed.

When the Medical Association of Georgia began this work in 1917 it was customary to have enthusiastic public meetings with elaborate newspaper reports—a regular "Billy Sunday" revival as it were. This was true in all parts of the country. "Cancer Week" was a National affair, sponsored by the American Society for the Control of Cancer and participated in by state medical associations, churches and social organizations of all kinds. This method of education was no doubt productive of much good. Our slogan was that the medical profession would, like merchants, give the people what they demanded, but we were unable to get the public aroused to the point of making a whole-hearted demand for better diagnostic methods. Doctors in some sections responded and notable advance has been made—still the death rate from cancer has continued to increase.

Two groups are responsible for 50 per cent of the cancer deaths—the doctor and the patient. Which of these are the greatest criminals? The average individual, because he has been taught by the quacks to expect pain and an ugly sore, waits eight months after discovering symptoms of cancer before consulting a doctor. With chances of a cure decreasing 10 per cent per month in certain types some doctors even now cause a still further delay before instituting proper treatment. It is difficult for the family doctor to diagnose early cancer, for one rarely sees more than four or five a year and these of different types and in different localities. So we are loath to place the responsibility.

At the present more educational advances are being made than ever before, bringing the truth home to the physicians and endeavoring to make each family doctor a teacher. Cancer clinics are springing up all over the country and special meetings are being devoted to the study of diagnostic methods so that cancer may be recognized early while it is curable.

We must get the rank and file of the profession interested so that in making their rounds the subject can be approached and each family can be taught the truth about malignant tumors:

First, that cancer is not hereditary; second, it is not due to bad blood; third, it does not cause pain early in its course; fourth, early cancer is curable because it is local and can be eradicated; fifth, late cancer is not curable because it has spread to other parts of the body.

J. L. CAMPBELL, M.D.,
Chairman Cancer Commission of the
Medical Assn. of Georgia.

EIGHTEENTH ANNIVERSARY

MEDICAL ASSOCIATION OF GEORGIA

ANNUAL SESSION

Macon, May 8, 9, 10

WHERE SHALL WE SPEND OUR VACATION?

All doctors should take a vacation. Whether they are busy, or whether they are not, it is essential to keep in physical condition, to have a change once in a while, and this should apply to doctors more than anyone else, as the strain they labor under year in and year out. If they do not play some, there is but one end, a nervous breakdown, then it is too late to play.

The American Medical Association meets this year in Portland, Oregon, in July and we should now plan to take the opportunity that is offered by the American Express Company to take advantage of a wonderful Western trip at a very low cost. They have arranged six optional trips, varying in price, according to the trip desired. Going out to Portland over the Canadian Pacific, making stops at different points, in the great Northwest of Canada, seeing the wild life and the Canadian Rockies, Lake Louise, a daylight trip down Puget Sound, to Seattle, then to Portland.

Five days at Portland, then back over Northern Pacific, seeing the great Northwest of America. Four one half days in Yellowstone Park, or back through Glacier Park, or down to San Francisco, Hollywood and return.

To take any of these trips as outlined by the American Express Company, would cost forty to fifty per cent more if taken as individuals. A party from Georgia, Florida and South Carolina will assemble in Atlanta, leaving at 6:30 P. M., June 28th. This opportunity is given to doctors' wives and families. If enough reservations are made we will have a "Doctors' Special."

This is a wonderful opportunity to take a delightful vacation, to attend a very scientific meeting of the American Medical Association and pay tribute to Mrs. Allen H. Bunce, who has been honored by the Woman's Auxiliary of the American Medical Association, the highest honor they can bestow upon anyone, as president of this distinguished body of doctors' wives.

MARION T. BENSON, M.D.

EMORY CLINICS

Definite arrangements are now being perfected for the coming Post Graduate Clinics that have for quite a number of years been put on by Emory University during commencement week. The committee on programs has held its first meeting and the work for the week is now being outlined by this committee. The first day, June 3, will be spent on the campus at Emory University. This clinic week is becoming very popular with the doctors of our State and we hope that this year will see a still larger number attend through the entire five day clinic. The very best talent in the city of Atlanta will offer their services to the doctors of Georgia free of charge and the week will be wound up with a banquet to the Alumnae and Graduating Class of Emory University.—Georgia's Health, February, 1929.

CRAWFORD W. LONG MEMORIAL PRIZE

To the Officers of Association:

This is to advise you that the committee appointed to conduct the Crawford W. Long Memorial Prize essay contest has given careful consideration to all papers offered for this prize at the annual convention of the Medical Association of Georgia, in Savannah, Ga., May, 1928, and as a result of the consideration of these essays the committee wishes to report that no paper was of sufficient merit to warrant the presentation of the prize. Hence, no prize will be presented this year. It will, however, be offered for the coming year on essays presented at the annual convention in Macon in May, 1929.

This committee wishes to commend the essayists, who competed, for their splendid work and industry and trust that they will continue to enter essays for the contests in the future years. It should be noted that the prize is rewarded for original medical work of any character and that the essay embodying this work must be presented before the annual convention of the Medical Association of Georgia.

WM. R. DANCY, M.D.,
Chairman.

Savannah, Ga., February 25, 1929.

Dr. Morris Fishbein, Editor, The Journal of the American Medical Association, will attend the Macon session of our Association and deliver the principal address at the public meeting on Wednesday, May 8th.

ATTENDANCE A. M. A.

To the Editor:

Your letter of March 5th received, stating that I had been appointed by Dr. C. K. Sharp, President, as Chairman of the State Committee on Attendance to the American Medical Association session to be held at Portland, July 7 to 12, inclusive.

I will be glad to assume this responsibility and will endeavor to secure a representative attendance at this meeting. I have the itinerary as outlined by the American Express Company, which I think is very fine. Have an engagement with their representative today and will go over this matter.

Would suggest the following committee: Dr. B. T. Wise, Americus; Dr. William H. Myers, Savannah; Dr. William A. Mulherin, Augusta; Dr. W. F. Reavis, Waycross; Dr. A. R. Rozar, Macon, and Dr. J. H. Downey, Gainesville.

MARION T. BENSON, M.D.,
Chairman.

Atlanta, Ga., March 9, 1929.

CONFERENCE ON HEALTH AND INDUSTRY

The Conference on Health and Industry called by Dr. C. K. Sharp, Arlington, President of the Association, was held at Hotel Dempsey, Macon, March 6.

The following organizations were represented:

Medical Association of Georgia, State Board of Health, Parent-Teacher Association, Woman's Christian Temperance Union, Woman's Auxiliary to the Medical Association of Georgia, Georgia State Nurses' Association, Nursing Service Metropolitan Life Insurance Company, Georgia League of Women Voters, and Georgia State Health Officers Association.

Dr. T. F. Abercrombie, Commissioner of Health, gave a detailed report of the activities of the departments of the State Board of Health which included: Division of Hygiene, County Health Work, Venereal Diseases, Laboratory, State Tuberculosis Sanatorium at Alto, institution for the Feeble Minded at Gracewood, and Vital Statistics.

Representatives from all the organizations mentioned endorsed the program of the State Board of Health.

The study of health was suggested as a part of every school curriculum. Periodic health examinations for adults were endorsed. Increased appropriations for the State Board of Health were approved and recommended.

Dr. R. H. Fike, Atlanta, was nominated to represent Georgia in the American Society for the Control of Cancer.

Dr. Chas. E. Waits, chairman of the Committee on Public Policy and Legislation, asked the representatives of all the organizations represented to support the Basic Science Bill as drawn and sponsored by the Association. Dr. C. W. Roberts, Atlanta, gave an outline of the bill and stressed the importance of necessary qualifications for physicians.

NEUROLOGICAL DISEASES

(Continued from Page 117)

The question has been asked, how are we to learn in a scientific way the indications for calcium and the other four principal salts? So far, no scientific method has been devised, and they still remain in the realm of the Art of Medicine instead of the science.

Observation has taught us that cases with marked calcium deficiency frequently carry acid saliva, are very sensitive to pain, suffer from neuritis, bloat badly, and tend toward edemas and poor cardiac functions.

To briefly summarize, if we would place our treatment on a more rational basis, let us bear in mind:

1st. The importance of Natural Therapeutics as a curative agent, the chief of which is, Psysiological and Mechanical Rest.

2nd. The effects of Disturbances of the Inorganic Enrivonment.

3rd. The natural barriers to the treatment of the Central Nervous System.

4th. The Mutual Antagonism of Inorganic Salts as shown particularly by the Sodium Calcium ratio.

REFERENCES

Chemical Pathology—Wells.
Biochemistry and Physiological Therapeutics—Alexander Chittick.
New Treatment of Disease—Dr. Schussler.
Reports of the St. Andrews Institute for Clinical Research, Vol. 11.
Rest and Pain—Hilton.
Pathological Physiology—Rost.
Principles of Biochemistry—Robertson.

District and County Societies

DISTRICT OFFICERS

FIRST DISTRICT

President.....Myers, William H., Savannah
1st Vice-Pres.....Elarbee, Geo. W., Daisy
2nd Vice-Pres.....Ezell, Howard E., Oliver
Sec'y-Treas.....Long, Wm. V., Savannah

SECOND DISTRICT

President.....Chason, Thomas, Donalsonville
Vice-Pres.....Sanchez, S. E., Barwick
Sec'y-Treas. .....Watt, Chas. H., Thomasville

THIRD DISTRICT

President.....Lunsford, G. G., Cordele
Vice-Pres. .....Ware, R. M., Fitzgerald
Sec'y-Treas. .....Greer, Chas. A., Oglethorpe

FOURTH DISTRICT

President.....Clark, W. H., LaGrange
Sec'y-Treas.....Callaway, Enoch, LaGrange

FIFTH DISTRICT

President.....Fort, A. G., Atlanta
Vice-Pres.....Camp, R. T., Fairburn
Sec'y-Treas.....Evans, J. R., Decatur

SIXTH DISTRICT

President.....Miller, G. T., Macon
Vice-Pres.....Hunt, K. S., Griffin
Sec'y-Treas.....Thompson, O. R., Macon

SEVENTH DISTRICT

President.....Harbin, R. M., Rome
Vice-Pres.....Wood, C. V., Cedartown
Sec'y-Treas.....McCord, M. M., Rome

EIGHTH DISTRICT

President.....Carter, D. M., Madison
Vice-Pres.....Gholston, W. D., Danielsville
Sec'y-Treas. .....Gerdine, Linton, Athens

NINTH DISTRICT

President.....Coker, Grady N., Canton
Vice-Pres. .....Neal, L. G., Cleveland
Sec'y-Treas.....Bennett, J. C., Jefferson

TENTH DISTRICT

President.....Cranston, W. J., Augusta
Vice-Pres. .....McGahee, R. C., Warrenton
Sec'y-Treas.....Phinizy, Irvine, Augusta

ELEVENTH DISTRICT

President.....McMichael, J. R., Quitman
Vice-Pres.....Fleming, Albert, Folkston
Sec'y-Treas. .....Reavis, W. F., Waycross

TWELFTH DISTRICT

President.....Franklin, R. C., Swainsboro
Vice-Pres.....Edmondson, J. W., Dublin
Sec'y-Treas.....Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.

2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richland, November 12, 1928.

3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.

4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.

5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.

6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.

7. Jasper County, Dr. E. M. Lancaster, Shady Dale, January 19, 1929.

8. Ben Hill County, Dr. L. S. Osborne, Fitzgerald, January 21, 1929.

9. Taylor County, Dr. J. C. Hind, Reynolds, January 29, 1929.

10. Monroe County, Dr. J. O. Elrod, Forsyth, February 6, 1929.

11. Barrow County, Dr. W. L. Matthews, Winder, February 7, 1929.

NEW MEMBERS FOR 1929

Allen, H. Homer, Decatur.
Avery, Maddin, LaGrange.
Bagley, J. B., Waycross.
Bishop, L. H., Unadilla.
Byne, J. M., Jr., Waynesboro.
Crouch, Henry W., Marietta.
Curry, J. W., Rome.
Daniel, C. H., College Park.
Farmer, L. P., Fargo.
Fite, B. W., Resaca.
Gray, R. M., Sugar Valley.
Haggard, Charles, Mableton.
Harrell, D. B., Tifton.
Hutchins, Earnest H., Sparta.
Jenkins, W. F., Columbus.
Johnson, T. H., Douglas.
Kelley, W. A., Smyrna.
Kitchens, O. W. Byromville.
Luke, Wm. F., Atlanta.
Moore, W. A., Alapaha.
Nelson, G. W., Marshallville.
Pate, R. H., Unadilla.
Peterson, N., Tifton.
Quillian, E. P., Valdosta.
Reid, W. H., Austell.
Schreiber, E. E., Menlo.
Shaw, M. F., Omega.
Stanford, J. W., Trion.
Story, F. C., Jesup.
Summerfield, J. E., Atlanta.
Taylor, T. W., West Point.
Williams, Chas. W., Cedartown.

COUNTIES REPORTING FOR 1929

Taylor County Medical Society—100 Per Cent

Taylor County Medical Society announces the following officers for 1929:

President—W. W. Edwards, Butler.
Vice-President—S. H. Bryan, Reynolds.
Secretary-Treasurer—J. C. Hind, Reynolds.
Delegate—R. C. Montgomery, Butler.

Whitfield County Medical Society

Whitfield County Medical Society announces the following officers for 1929:

President—R. S. Bradley, Dalton.
Vice-President—J. C. Rollins, Dalton.
Secretary-Treasurer—E. O. Shellhorse, Dalton.
Delegate—Trammell Starr, Dalton.
Censors—G. L. Broaddrick, H. L. Erwin and J. H. Steed.

Fulton County Medical Society

Fulton County Medical Society announces the following officers for 1929:

President—Charles E. Waits, Atlanta.
Vice-President—James N. Brawner, Atlanta.
Secretary-Treasurer—Howard Hailey, Atlanta.
Censors—Hal C. Miller, L. G. Kelley and J. B. Fitts.

Colquitt County Medical Society

Colquitt County Medical Society announces the following officers for 1929:

President—W. L. Bennett, Moultrie.
Vice-President—J. E. Lanier, Moultrie.
Secretary-Treasurer—T. H. Chesnutt, Moultrie.
Delegate—C. C. Brannen, Moultrie.
Censors—J. E. Lanier and E. L. Lawson.

Richmond County Medical Society

Richmond County Medical Society announces the following officers for 1929:

President—G. T. Bernard, Augusta.
Vice-President—G. L. Kelly, Augusta.
Secretary-Treasurer—C. D. Ward, Augusta.

Chatham County Medical Society

Chatham County Medical Society announces the following officers for 1929:

President—H. T. Exley, Savannah.
Vice-President—Lee Howard, Savannah.
Secretary-Treasurer—A. A. Morrison, Savannah.
Delegates—William Shearouse and H. H. McGee.
Censors—Charles Usher, William R. Dancy and R. V. Martin.

Emanuel County Medical Society

Emanuel County Medical Society announces the following officers for 1929:

President—V. E. Franklin, Graymont.
Vice-President—Charles E. Duffin, Swainsboro.
Secretary-Treasurer—R. C. Franklin, Swainsboro.
Delegate—E. T. Coleman, Graymont.
Censors—A. C. Johnson, J. M. Nunez and George L. Smith.

Jefferson County Medical Society

Jefferson County Medical Society announces the following officers for 1929:

President—Walter P. Holmes, Wadley.
Vice-President—John J. Pilcher, Wrens.
Secretary-Treasurer—S. T. R. Revell, Louisville.
Delegate—V. L. Bryant, Bartow.
Censors—S. C. Ketchens, J. D. Peacock, and J. R. Lewis.

Ocmulgee Medical Society
(Bleckley, Dodge, Pulaski)

Ocmulgee Medical Society announces the following officers for 1929:

President—Ernest L. Smith, Eastman.
Vice-President—O. F. Collum, Chauncey.
Secretary-Treasurer—Albert R. Bush, Hawkinsville.
Delegate—Albert R. Bush, Hawkinsville.

Spalding County Medical Society

Spalding County Medical Society announces the following officers for 1929:

President—C. F. Griffith, Griffin.
Vice-President—W. H. Austin, Griffin.
Secretary-Treasurer—H. J. Copeland, Griffin.
Delegate—W. C. Miles, Griffin.
Censors—H. W. Copeland, W. H. Steele and M. S. Crowder.

Blue Ridge Medical Society

Blue Ridge Medical Society announces the following officers for 1929:

President—J. M. Daves, Blue Ridge.
Vice-President—N. C. Goss, Ellijay.
Secretary-Treasurer—Claud B. Crawford, Blue Ridge.
Delegate—Claud B. Crawford, Blue Ridge.
Censors—N. C. Goss, W. H. Rogers and C. B. Crawford.

Butts County Medical Society

Butts County Medical Society announces the following officers for 1929:

President—A. F. White, Flovilla.
Vice-President—O. B. Howell, Jackson.
Secretary-Treasurer—R. L. Hammond, Jackson.

Brooks County Medical Society

Brooks County Medical Society announces the following officers for 1929:

President—G. D. Dorough, Quitman.
Secretary-Treasurer—R. E. McClure, Quitman.
Delegates—J. R. McMichael, Quitman.

Morgan County Medical Society

Morgan County Medical Society announces the following officers for 1929:

President—J. L. Porter, Rutledge.
Vice-President—W. M. Fambrough, Bostwick.
Secretary-Treasurer—D. M. Carter, Madison.
Delegate—W. C. McGeary, Madison.
Censors—W. C. McGeary and J. L. Porter.

Talbot County Medical Society

Talbot County Medical Society announces the following officers for 1929:

President—J. E. Peeler, Woodland.
Vice-President—W. P. Leonard, Talbotton.
Secretary-Treasurer—C. C. Carson, Talbotton.
Delegate—G. L. Carter, Talbotton.

Monroe County Medical Society—100 Per Cent

Monroe County Medical Society announces the following officers for 1929:
President—G. H. Alexander, Forsyth.
Vice-President—T. C. Clodfelter, Forsyth.
Secretary-Treasurer—J. O. Elrod, Forsyth.
Censors—B. L. Smith, W. J. Smith, and R. C. Goolsby.

Walker County Medical Society

Walker County Medical Society announces the following officers for 1929:
President—M. W. Spearman, Chickamauga.
Vice-President—J. A. Shields, LaFayette.
Secretary-Treasurer—J. H. Hammond, LaFayette.

Bartow County Medical Society

Bartow County Medical Society announces the following officers for 1929:
President—W. E. Wofford, Cartersville.
Secretary-Treasurer—A. L. Horton, Taylorsville.
Delegate—T. Lowry, Cartersville.
Censors—W. C. Griffin, R. E. Wilson and R. E. Adair.

Wayne County Medical Society

Wayne County Medical Society announces the following officers for 1929:
President—J. L. Tyre, Screven.
Vice-President—I. K. Ogden, Odum.
Secretary-Treasurer—A. J. Gordon, Jesup.

Evans County Medical Society

Evans County Medical Society announces the following officers for 1929:
President—George W. Elarbee, Daisy.
Vice-President—John W. Daniel, Claxton.
Secretary-Treasurer—S. T. Ellis, Claxton.

Hart County Medical Society

Hart County Medical Society announces the following officers for 1929:
President—G. T. Harper, Dewy Rose.
Vice-President—A. O. Meredith, Hartwell.
Secretary-Treasurer—W. E. McCurry, Hartwell.
Delegate—G. T. Harper, Dewy Rose.

Carroll County Medical Society

Carroll County Medical Society announces the following officers for 1929:
President—L. E. Wilson, Bowdon.
Vice-President—D. S. Reese, Carrollton.
Secretary-Treasurer—H. J. Goodwyn, Carrollton.
Delegate—E. G. Kirby, Bowdon.
Censors—C. C. Fitts, W. A. Aderhold and O. W. Roberts.

DeKalb County Medical Society

DeKalb County Medical Society announces the following officers for 1929:
President—C. L. Allgood, Scottdale.
Vice-President—B. V. Wilson, Decatur.
Secretary-Treasurer—J. R. Evans, Decatur.
Censor—H. Homer Allen, Decatur.

Hancock County Medical Society

Hancock County Medical Society announces the following officers for 1929:
President—H. L. Earl, Sparta.
Secretary-Treasurer—C. S. Jernigan, Sparta.
Delegate—C. S. Jernigan, Sparta.

Chattooga County Medical Society

Chattooga County Medical Society announces the following officers for 1929:
President—B. F. Shamblin, Lyerly.
Vice-President—R. E. Talley, Trion.
Secretary-Treasurer—H. D. Brown, Summerville.
Delegate—R. E. Talley, Trion.
Censors—W. B. Hair, N. A. Funderburk and M. N. Wood.

EPILEPSY

(Continued from Page 121)

13. Green, W. Journ. Mich. State Med. Soc. 27:525. Aug., 1928.
14. Dandy, W. Bull. Johns Hop. Hosp. 34:245., 1923.
15. Reichmann. Deut. Zeit. f. Nervenheilk. Vol. 94, 1926.
16. Wagstaffe, W. 'Incidence of Traumatic Epilepsy After Gunshot Wound of the Head." Lancet 2:861. Oct. 27, 1928.
17. Dowman, C. E., and Smith, W. A. "Intracranial Tumor—Review of 100 Verified Cases." Arch. Neurol. and Psych. 20:1312. Dec., 1928.
18. Elsberg, C. A.—Pike, F. H. Influence of a general increase or diminution of intracranial pressure upon the susceptibility of animals to convulsive seizures. A. M. Journal Physical—76:593, May, 1926.
19. Dandy, W., and Elman, R. "Studies in Experimental Epilepsy." Bull. Johns Hop. Hosp. 36:40. Jan. 1925.
20. Spielmeyer, W. Zentralbl. f. d. ges. Neurol. u. Psychiat. Oct. 5, 1926.
21. Peterman, M. G. "Epilepsy in Childhood"—Journ. Am. Med. Assn. 88:1868. June 11, 1927.
22. Muskens, L. J. J. "Epilepsy, Comparative Pathogenesis, Symptoms, Treatment." Wm. Wood and Co. New York. 1928.
23. Patterson, H. A., and Levi, P. "Spinal Fluid in Epilepsy." Arch. Neurol. and Psych. March, 1926.
Osnato et al. "Comparative Chemical Studies of the Blood and Spinal Fluid in Epilepsy." Brain 50:581. 1927.
Lennox, W. G. et al. "Studies of Metabolism in Epilepsy." Arch. Neurol. and Psych. 18:383, 395. Sept., 1927.
Lennox, W. G., and Wright, L. H. "Studies in Epilepsy—The basal Metabolism." Arch. Neurol. and Psych. 20:764. Oct., 1928.
Lennox, W. G., and Conner, M. T., and Wright, H. L. "Studies of Metabolism in Epilepsy." Arch. Neurol and Psych. 11:54. Jan., 1924.
24. Lennox, W. G. "Studies in Epilepsy—The Fibrin Content of the Blood." Arch. Neurol. and Psych. 20:345. Aug. 1928.
25. Osnato, M. and Killian, J. Arch. Neurol. and Psych. June, 1926.
26. Rafflin, R. "Urinary Ammonia and Acidity in the Normal." Comp. rend. d. Soc. d. Biol. 92:1361. 1925.
"Urinary Ammonia and Acidity in Epileptics." ibid 92:1429. 1925.
27. Guneo, G. "The Genesis of Epileptic Albumosemia and The Intestinal Digestion of Proteins." Note e rev. d. psichiat. 14:381. Sept.-Dec., 1926.
28. Wuth, O. "On the Pathogenesis of Epileptic Convulsions." Zeit. f. d. ges. Neurol. u. Psych. 109:521. May 16, 1927.
29. Cob, S., and Lennox, W. G. "Epilepsy," Medicine 7:105. May, 1928.

BOOK REVIEWS AND ABSTRACTS

Mark S. Dougherty, M. D.
Department Editor

BOOK REVIEWS

Clinical Aspects of the Electrocardiogram. Harold E. B. Pardee, M.D., Assistant Professor of Clinical Medicine, Cornell University Medical School; Assistant Attending Physician, New York Hospital; Consulting Cardiologist. Lying in Hospital and Woman's Hospital, New York City. Second edition, revised. Pages, 242, with 60 illustrations. Published by Paul B. Hoeber, Inc., New York City, 1928.

This book has been termed, "A Manual For Physicians and Students," and a manual it is. The ten chapters are labeled as follows: Introductory, The Normal Electrocardiogram and Its Variations, Changes Due to Hypertrophy of the Auricles and Ventricles, Changes Due to Myocardial Abnormality, Clinical Significance of Abnormal Waves, Disturbances in Rate or Rhythm, Clinical Aspects of Abnormal Rate and Rhythm, Clinical Application of the Electrocardiogram, Theory of the Electrocardiogram, Description and Operation of the Electrocardiograph. Appendix I gives Einthoven's Tables for determining the angle alpha and the manifest potential, while Appendix II shows a method of filing and indexing electrocardiographic records.

The subject matter is very complete and is systematically arranged. As the author points out in the preface, "no new basic principles in the clinical use of the electrocardiogram have appeared." The most striking change is the adoption of a new terminology to express the variations of the Q. R. S. group which Einthoven attributed to hypertrophy of the ventricles. Portable instruments are now on the market which make use of the familiar radio amplifier tube to increase the power of the heart's current so that a less fragile instrument than the string galvanometer may be used to record the electrocardiogram. These instruments are described in the text.

The bibliography is excellent and is systematically arranged according to physiological and electrocardiological headings.

I recommend this book most highly to all who would strive to elevate cardiology to a higher plane.

EVERT A. BANCKER, JR., M.D.

"Neurological Examination. An Exposition of Tests With Interpretation of Signs and Symptoms," by Charles A. McKendree, A.B., M.D., with foreword by Henry Alsop Riley, A.M., M.D. W. B. Saunders Co., Philadelphia, 1928. 280 pages. Illustrated.

In dealing with diseases of the nervous system, it is of paramount importance that the examination be complete and systematically performed. This volume contains an outline of methods of neurological examination as used in the New York Neurological Institute, and as taught in the Department of Neurology of Columbia University. It should be a valuable aid in making the various tests accurately. The various signs are interpreted on the basis of neural anatomy and physiology. The book can be heartily recommended to students and practitioners.

WM. A. SMITH, M.D.

Diseases of the Gall Bladder and Bile Ducts. A book for practitioners and students, by Evart Ambrose Graham, A.B., M.D., Professor of Surgery, Washington University School of Medicine, St. Louis; Surgeon-In-Chief, Barnes Hospital and St. Louis Children's Hospital.

Warren Henry Cole, B.S., M.D., Instructor in Surgery, Washington University School of Medicine; Assistant Attending Surgeon, Barnes Hospital and St. Louis Children's Hospital.

Glover H. Copher, A.B., M.D., Assistant Professor of Surgery, Assistant Professor of Surgery, Washington University School of Medicine; Assistant Attending Surgeon, Barnes Hospital and St. Louis Children's Hospital.

Sherwood Moore, M.D., Professor of Radiology, Washington University School of Medicine; Director of Mallinckrodt Institute of Radiology; Radiologist to Barnes Hospital, St. Louis Children's Hospital, Shriners' Hospital and St. Louis Maternity Hospital. Price, $8.00. Lea & Febiger.

An enormous amount of study from every angle by many men and an enormous amount of space in the medical journals has been the lot of the gall bladder and biliary tracts in recent years, and it has been maintained that 40 per cent of the adult population harbors disease of this system. Yet until this publication no book devoted to the subject has appeared in English since 1905. These authors are particularly well qualified for the task they have undertaken as much of the current interest is unquestionably due to cholecystography, which they introduced.

Medical slang, only too common in the journals of the day, was detected but once. The book is almost free from typographical errors, and it is splendidly illustrated. The most striking thing to my mind is how they have condensed a world of material, including much that was published in 1928 and some that had not even been published at the time of going to press, into a clear and readable exposition. "Throughout the whole book a thread has been followed more or less conspicuously which serves to emphasize the importance of considering disturbances of the liver and other organs as a part of the picture of cholecystitis. Too often the gall bladder has been

considered in clinical writings as an isolated structure without due regard for the serious consequences of its disorders upon other viscera." It is admirable how they have given both sides of some disputed points, and in one or two instances have gracefully retired from positions previously held by them. It will be a most exceptional physician, surgeon or roentgenologist, if there be any such, who can not profit from a study of this book.

The somewhat detailed chapter on the anatomy of the gall bladder should not only be of practical value to the surgeon, but also serves as a preparation for the excellent discussion of its physiology. The medical world is coming more and more to a realization that the medicine of tomorrow, if not of today, is founded in a sound knowledge of physiology.

"It seems particularly desirable to be able to recognize functional disturbances. It seems fairly clear that the gall bladder can produce symptoms even when it does not present definite evidence of inflammatory disease." These sentences may increase the number of unnecessary cholecystectomies. The authors emphasize the importance of detecting cholecystic disease early and believe that the vesicle should be removed before the formation of stones and extensive damage to the liver. The chapter on pathogenesis and pathology is excellent. In at least one case out of every 25 with stones carcinoma is found. It is interesting to note that gall stones in the lower animals are spoken of in the ancient Talmud, but their occurrence in the human was mentioned for the first time one hundred years after the discovery of America.

They emphasize that chronic cholecystitis is by far the most common organic cause of indigestion and that its diagnosis no longer depends upon a history of gall stone colic with jaundice. They dwell upon the necessity of distinguishing gall bladder pain from cardiac pain; this is being borne in upon the profession today but it has not yet reached the textbooks. Dr. Strickler has recently pointed out that cholecystic disease may sometimes simulate angina, but it would appear that the reverse is more common. Intestinal allergy is well discussed.

In the differential diagnosis, lesion of the spine is mentioned, but not tabes nor tumors in the spinal canal or thorax. During the past six weeks two patients with pain from pressure by intrathoracic neoplasm upon the intercostal nerves, which suggested gall bladder disease, have been observed at the Steiner Clinic; one had already suffered cholecystectomy and the other had narrowly escaped this fate.

"Cholecystography has been discussed extensively and although the authors may plead a paternal interest as an excuse for what may seem an unwarranted confidence in its diagnostic accuracy, an attempt has also been made to present its weaknesses and shortcomings." The success of this attempt is not striking; although these men are probably without a peer in cholecystography, it seems to me they are a bit too enthusiastic on the subject. Among the factors that alter the cholecystogram is late pregnancy; the authors are to be commended for terming this a "physiologic condition." They prefer the roentgenologist to make an objective diagnosis, but "This does not mean that common sense is to be omitted in this or any other radiological interpretation." They believe the intravenous administration of the dye is more reliable than the oral. Contra-indications are decompensated heart disease, arteriosclerosis especially when the arterial tension is low, badly damaged liver and impending uremia.

They repeatedly emphasize that cholecystography is above all a test of the function of the gall bladder. They have reviewed the various tests proposed for the function of the liver, outlining the necessary technic, and giving them a careful appraisal. This thoroughly sane chapter will save the interested reader much work.

The surgical aspects of the gall bladder and ducts are clearly and concisely presented, but "the medical treatment is only briefly discussed because frankly the authors consider non-surgical methods of treatment inefficient except as they are used symptomatically and as a means of preparing patients for operation." May this speed the day of departure of the so-called medical drainage of the gall bladder as a therapeutic procedure.

L. MINOR BLACKFORD, M.D.

Since writing the foregoing I have read the rather extensive review in a recent number of the Journal of the American Medical Association. Most of the space in this is taken up with unfavorable criticisms, the chief ones of which are that one anatomical anomaly has been omitted, clinical consideration is inadequate, too much space is devoted to cholecystography (which is not necessary as a matter of routine),—in passing, a roentgenologist has criticized the book to me because not enough space was devoted to cholecystography—and that the chapter on functional tests of the liver is out of place. The criticism of the clinical chapter is rather well founded, but the purpose of the book as set forth in the preface and quoted above required the chapter on the liver. However, I concur heartily in the closing sentence of the A. M. A. review, "It is a most practical treatise and will take its place with the clasics of medicine." L. M. B.

ABSTRACT

Operative Mortality

In *Hospital Management* for November, 1928, Dr. R. M. Harbin, Rome, Ga., shows that active surgeons have a lower mortality rate than occasional operators. He chose the treatment of appendicitis as affording tangible statistics for comparison. This survey comprised 30 per cent of the general hospital beds daily occupied in Georgia, according to the hospital number of the Journal of the American Medical Association and from information obtained from the State Board of Health.

The following deductions may be drawn from this survey:

During 1927, 6 per cent of the daily population

of general hospitals of the state (3,045) were patients with appendicitis, estimating the average stay in hospital at eleven days.

There were 663 medical men in the state who operated for 6,333 cases of appendicitis, 73 being active surgeons and 590 being occasional operators.

Eleven per cent of total number of operators treated 47 per cent of the cases with a mortality of 1.5 per cent and an average of 40 cases per operator.

Eighty-nine per cent of operators treated 53 per cent of cases with a death rate of 3.8 per cent and an average of 5.6 cases per operator.

For the small hospitals active surgeons treated 43 per cent of cases having a mortality rate of 0.4 per cent and an average of 29 cases per operator, while the occasional operators had a death rate of 5 per cent and 4.5 operations per surgeon.

In the large hospitals active surgeons treated 46 per cent of cases, with a mortality of 2.6 per cent and an average of 9.7 cases per operator, while the occasional operator with 54 per cent of cases had a rate of 3.7 per cent and an average of six cases per operator.

There was little difference in the degree of activity of the occasional operators in small and in large hospitals and they are assumed to have treated 53 per cent of all cases in the state during 1927. For instance, in one hospital averaging 100 patients there was a total of 414 operations by 41 men and the two operators doing the greatest number of operations, treated 78 cases (18.8 per cent). It is probable that only a few operations were performed by them at other hospitals during the same period.

This would seem to prove wrong the prevailing impression that the occasional operator is an affliction of only the small hospital.

BOOKS RECEIVED

Cardiac Arrhythias. Clinical Features and Mechanism of the Irregular Heart, by Irving R. Roth, M.D., Assistant in Medicine: Chief, Children's Cardiac Clinic, Mt. Sinai Hospital; Instructor in Post-Graduate Studies on Diseases of the Circulatory System, conducted by Columbia University at Mt. Sinai Hospital, New York. Introduction by Emanuel Libman, M.D., Clinical Professor of Medicine, Columbia University. Contains 210 pages with 80 illustrations and five tables. Price, net $7.50. Publishers: Paul B. Hoeber, Inc., 76 Fifth Avenue, New York City.

Spinal Anesthesia (Subarchnoid Radicular Condition Block), *Principals and Technique,* by Charles H. Evans, M.D., Clinical Assistant, New York Post Graduate Medical School and Hospital, Lying-In Hospital of the City of New York; Assistant Surgeon, New Jersey Orthopedic Hospital, Orange, N. J. Introduction by W. Wayne Babcock, M.D. Foreword by Charles Gordon Heyd, M.D. Contains 203 pages, with 41 illustrations, three in color and one folding colored plate. Price, net, $5.50. Publishers: Paul B. Hoeber, Inc., 76 Fifth Avenue, New York City.

The Story of Modern Preventative Medicine, Being a Continuation of the Evolution of Preventive Medicine, 1927, by Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P., formerly principal medical officer of the local Government Board of England, and lecturer on public health administration, School of Hygiene and Public Health, the Johns Hopkins University. Contains 291 pages. Publishers: The Williams & Wilkins Company, Mt. Royal and Guilford Avenues, Baltimore, Maryland.

Angina Pectoris by Harlow Brooks, M.D., Emeritus Professor of Clinical Medicine, New York University; Visiting Physician, City Hospital; Consulting Physician, Fifth Avenue, French, Polyclinic, Montefiore, Norwegian and Beth Isreal Hospitals, New York City. Colonial Medical Reserve, U. S. A. Contains 163 pages. Price, $2.50. Publishers: Harper & Brothers. 49 East Thirty-third Street, New York City.

MACON

A city of 70,000 people, located within six miles of the geographical center of the State of Georgia.

Served by five railroads with nine radiating lines; ninety-eight daily passenger trains.

Center of inexhaustible kaolin deposits. A trainload of brick is now shipped from Macon and vicinity daily.

Paved highways radiate in every direction and Macon is on the 141 mile stretch of continuous pavement between Perry and Marietta.

In Macon are eighty-nine churches, representing practically every denomination. There are forty-six modern public schools in the county.

Millions of feet of hardwood lumber manufactured here annually by largest Poplar Mill in world.

Places of Interest

Wesleyan College, oldest chartered college for women in the world, located on encampment hill, the latter used before the Civil War as camping ground for old militia. Now erecting new $3,000,000 plant.

Mercer University, moved from Penfield, Ga., to Macon in 1871.

Georgia Academy for the Blind, and Mount de Sales Academy.

Idle Hour Nurseries, largest greenhouses in the South.

Immense cotton mills, making every kind of textile product.

Six recreation parks, providing for swimming, boating, fishing and dancing.

Macon's new auditorium, an ideal place for conventions; it is equipped with halls, seating 4,000, 650, and 300 respectively. The auditorium is valued at $1,250,000 and has the largest copper-covered dome in the world.

Twenty million peach trees surrounding Macon. Thousands of pecan trees.

Home of Sidney Lanier, South's world-famous poet.

(Continued on Page 139)

Woman's Auxiliary Medical Association of Georgia

OFFICERS

President ..... Mrs. C. C. Hinton, Macon
Pres.-Elect ..... Mrs. Marion T. Benson, Atlanta
1st Vice-Pres. ..... Mrs. Wm. R. Dancy, Savannah
2nd Vice-Pres. ..... Mrs. W. F. Reavis, Waycross
3rd Vice-Pres. ..... Mrs. A. J. Mooney, Statesboro
Cor. Sec. ..... Mrs. J. A. Selden, Macon
Rec. Sec. ..... Mrs. Ralston Lattimore, Savannah
Treasurer ..... Mrs. M. B. Allen, Hoschton
Parliamentarian ..... Mrs.. J. Cox Wall, Eastman

Delegates to A. M. A.

Mrs. C. W. Roberts ..... Atlanta
Mrs. H. M. Fullilove ..... Athens

DELEGATES TO THE A. M. A.

Mrs. C. W. Roberts ..... Atlanta
Mrs. Dan Y. Sage ..... Atlanta
Mrs. Geo. W. Fuller ..... Atlanta
Mrs. J. Cox Wall ..... Eastman

WOMAN'S AUXILIARY FULTON COUNTY MEDICAL SOCIETY

The newly-elected offices of the Fulton County Medical Society and their wives will be the guests of honor at a beautiful reception, which will be given by the Woman's Medical Auxiliary at the Academy of Medicine on Friday evening at 8 o'clock.

Receiving with the president of the Woman's Medical Auxiliary, Mrs. W. A. Selman and Mrs. George Niles, the president-elect, will be these officers of the medical society: Dr. C. E. Waits, president, and Mrs. Waits; Dr. James N. Brawner, vice-president, and Mrs. Brawner; Dr. Howard Hailey, secretary and treasurer, and Mrs. Hailey.

On the reception committee are: Mrs. O. H. Matthews, Mrs. M. T. Edgerton, Mrs. Marion Benson, Mrs. Bomar White, Mrs. J. A. McCarity and Mrs. E. A. Allen.

The committee of hospitality includes the chairman and members of the following committees: Arrangements, Mrs. John Duncan; decorating, Mrs. W. W. Anderson; home, Mrs. W. C. Dabney; program, Mrs. C. W. Roberts and Mrs. Earl Quillian.

The reception rooms will be appropriately decorated for the occasion by Mrs. O. S. Cofer, Mrs. Trimble Johnson and members of the decorating committee.

Coffee will be poured by an attractive group of young matrons.

A delightful program which will be in the nature of a surprise has been provided by Mrs. C. W. Roberts and Mrs. Earl Quillian.

At the conclusion of the program dancing will be the feature of interest.—*Atlanta Journal*, Atlanta, February 12, 1929.

COMMUNICATIONS

DR. L. C. FISCHER PRIZE

Dr. C. E. Waits, President,
Fulton County Medical Society,
Atlanta, Georgia.
Dear Dr. Waits:

I have enjoyed very much the privilege of offering a premium of $100.00 each year for several years, to the member or members of the Fulton County Medical Society presenting the best paper, or the one presenting a report of the most original work or investigation in the year past. I have enjoyed very much some of the papers.

I have hoped that this would be an inducement to the young men especially, not from a monetary standpoint, but only as a premium for one's efforts along this line.

This offer has been made from year to year, and each year it has been my privilege to renew it. I therefore shall offer the same premium in 1929.

There was a time when I suggested a restriction to age, but after talking with several of the men, it was finally decided that it was best to leave it open to any member of the Society.

With kindest personal regards and best wishes, I am

Very truly yours,
L. C. FISCHER, M. D.

Atlanta, Ga., March 2, 1929.

RESOLUTION

The following resolution introduced by Dr. Dunbar Roy was unanimously passed by a rising vote of thanks and appreciation:

"RESOLVED:

"The Fulton County Medical Society at its regular meeting, March 7, 1929, hereby, again extends a vote of thanks to Dr. L. C. Fischer for his annual contribution to the Society in furtherance of the increased literary and scientific contributions to the cause of medicine and surgery."

COMMUNICATIONS

CONFERENCE ON PUBLIC HEALTH

To the Editor:

Your organization is cordially invited to have a representative present at the third annual Conference on Public Health to be held at the headquarters building of the American Medical Association, 535 North Dearborn Street, Chicago, on March 29 and 30, 1929. This invitation is extended in behalf of the Board of Trustees of the American Medical Association.

The public health agencies of the United States Government, all voluntary organizations, national in scope, that are interested in public health, and all state departments of health will be invited to send representatives.

The program on the first day will deal with the general topic, "How Various Agencies May Best Work Together In the Promotion of the Public Health." There will be one rather comprehensive paper under this topic, which will be discussed by a health officer, by a director of a voluntary organization interested in public health and by a practicing physician. The paper and the three discussions will occupy the morning session. The afternoon session will be given over to open discussion. On the morning of the second day two papers, more or less technical in nature, will be presented. These will deal with topics believed to be of general public health interest.

This program was decided on by a committee appointed by the President of the American Medical Association, in keeping with the expressed wish of the Conference on Public Health held in Chicago last year. It is the sense of the committee that discussions shall deal not with difficulties encountered in attempting to carry on co-operative programs of public health work but rather with the possibilities that field offers for co-operative effort, and with measures and methods that have already been successfully applied.

OLIN WEST, Secretary,
American Medical Association.

Chicago, Ill., February 11, 1929.

UNIVERSITY OF GEORGIA

To the Editor:

After consultation with quite a number of officials of county medical societies in sections of the state where we had contemplated offering post-graduate medical extension courses, it has been decided, in view of the limited time available for necessary work preliminary to the inauguration of our plan, to defer the carrying out of our program.

If it seems wise to have the real beginning made at the Macon convention, we shall be glad to have your kind suggestions. We have found considerable interest in many places, and not so much interest in other places. Physicians in all places were most cordial and helpful, and I shall be glad to have an opportunity sometime soon to talk the matter over with you more in detail.

J. C. WARDLAW,
Director of University Extension.

Athens, February 18, 1929.

To Members of Seventh District:

You need the Medical Association of Georgia, and likewise the association needs you possibly worse than ever before in its history.

Legislation will come before the general assembly next June, which is paramount to every medical man in the state. "The cults" are organizing to defeat every move we make. Are you willing to be defeated by them? They have the money. I don't know where they got it, but that makes no difference so far as the matter concerns us.

We cannot possibly do ANYTHING as an organization unless we are organized. The fellow who does not become a member and line up with us might well be classed as one who has lined up against his own profession, for it is ABSOLUTELY certain that we cannot do organized medicine ANY GOOD unless we are a part of the organization and willing to help with its problems.

It is possible that every eligible member in your county has already paid his dues for this year. I have not had a report of medical progress in your county recently. If such is not the case may I count on your cooperation and everlasting work until every eligible man in your county has become a part of this organization by the prompt payment of his state and county dues?

If your society has not yet organized for 1929 please let me count on your immediate assistance to help put this thing over. Get in touch with your president and secretary for 1928, and have a meeting called at once, say a dinner meeting. Get every active member to serve on a committee to see that every eligible member is present at this dinner. Organize, elect officers and pay dues and start the year 1929 off with a "bang" in your county and you will be repaid four-fold.

M. M. McCORD, Councilor.

Rome, February 12, 1929.

To the Editor:

There will be a meeting of the physicians from Cook, Berrien, Atkinson and Lanier counties held in Nashville Thursday night at 8 P. M. at the new hotel.

We will have supper Dutch style and discuss the organization of an active Medical Society of these counties. I am very anxious to see the physicians of the Eleventh District of Georgia progress in every sense of the word, and only by proper co-operation and study of medical subjects can this be accomplished, as you know the Eleventh District stands A-1 in percentage of men belonging to the State Association, so doctor, please remember the time and place and let us get together and make this a real evening of pleasure for every one in the organization of a live society.

The time is short, so will expect to meet you in Nashville, Thursday night, March 7th at 8 P. M.

W. F. REAVIS, Secretary,
Eleventh District Medical Society.

Waycross, March 4, 1929.

HOSPITAL BONDS

City of Columbus

"To the Honorable Mayor and Commissioners.

"Gentlemen:

"At a meeting of the medical profession of Columbus, Ga., held tonight, it was voted unanimously to appoint a committee of three to bring before you the following request:

"That the commission include in the proposed bond issue the sum of $250,000 for city hospital extension purposes. The tentative sum of $115,000 is totally inadequate to take care of what is urgently needed to relieve the constant and growing congestion in the hospital, as the larger portion of this money would have to be spent on the nurses' dormitory and administration buildings. The building is already far too small for the requirements of the city and provision must now be made for the natural growth of the community.

"Respectfully yours,

"T. F. SCHLEY,

"Secretary-Treasurer."

The petition will also bear the following signatures: Mercer Blanchard, William F. Jenkins, W. P. Jordan, G. S. Murray, G. J. Dillard, J. H. McDuffie, Sr., Harry W. Brooks, J. H. McDuffie, Jr., W. L. Cooke, J. C. Wooldridge, H. J. Bickerstaff, A. N. Dykes, F. L. Cosby, Sr., F. B. Blackmar, C. D. Johnson, J. B. Thompson, O. D. Gilliam.

—*Columbus Ledger, February* 20, 1929.

NEWS ITEMS

Abner Wellborn Calhoun Lectureship Committee announces that it has secured for the second lecture of the foundation, Dr. William Stevenson Baer, Baltimore, Md., Associate Professor of Clinical Orthopedic Surgery of the Johns Hopkins University School of Medicine, Baltimore. His subject will be Arthritis.

Colquit County Medical Society met at Moultrie, on February 6. Officers were elected for the ensuing year.

Burke County Medical Society met at the office of Dr. R. L. Miller, Waynesboro, February 6. Dinner was served and officers for the year elected and installed.

The annual meeting of the Board of Managers of the Savannah Hospital, Savannah, was held at the hospital on February 8. Reports from the officers were received and officers elected for the fiscal year.

Georgia Hospital Association was organized at Macon on February 6. Dr. Joe R. Clemmons, Macon, was elected president; Dr. Carlisle S. Lentz, Augusta, vice-president; Mr. J. B. Franklin, Atlanta, secretary-treasurer. The next meeting of the Association will be held at Macon, May 7.

A banquet was given by the North Side Branch of the Chicago Medical Society in honor of Drs. Malcolm LaSalle Harris, Frank Billings and William Allen Pusey at the third Albert J. Ochsner Memorial Lecture, on the "Physical Nature of Death," by Dr. George W. Crile, Chicago. The banquet was given at the Germania Club on February 21st.

The Surgical Association of the Atlanta & West Point Railroad Company, Western Railway of Alabama, Georgia Railroad, and the Elberton and Eastern Railroad, held its ninth annual meeting at the Ansley Hotel, Atlanta, February 7. Titles of papers on the Scientific program were as follows: Burns, by Dr. W. W. Harper, Selma, Ala.; Some Cardiac Disturbances, by Dr. Glenville Giddings, Atlanta; A Modified Thomas Splint in Fractures of the Neck of the Femur, illustrated with lantern slides, by Dr. S. R. Benedict, Birmingham, Ala.; Diversified Topics, by Dr. J. R. Garner, Atlanta, Chief Surgeon of the roads; Syphilis Among Railway Employees, by Dr. O. C. Wenger, Hot Springs, Ark.; Backs and Back Injuries, by Dr. H. M. Michel, Augusta; Eye Injuries, by Dr. B. F. Holding, Montgomery, Ala.; Relation Between Public Health and the Railroads, by Dr. T. F. Abercrombie, Atlanta. Dr. Eugene E. Murphey, Augusta, was elected president.

The Altamaha Medical Society, composed of the counties of Appling, Bacon and Jeff Davis, was reorganized recently. The following officers were elected: Dr. Horace C. McCrackin, president, Baxley; Dr. J. T. Holt, vice-president, Baxley; Dr. Overstreet, secretary-treasurer, Baxley.

Dr. H. P. Harrell, Augusta, was recently appointed physician for Augusta public schools.

Dr. and Mrs. W. D. Dorminy, Fitzgerald, entertained the members of the Ben Hill County Medical Society at a banquet on January 18.

Thomas County Medical Society met at Boston on February 12. The Scientific program consisted of a symposium on Tuberculosis. Papers were read by Drs. Charles H. Ferguson, John T. King, and James W. Reid, all of Thomasville.

Richmond County Medical Society met on January 31st. The subject of all papers and discussions was Malaria, Its Treatment and Control. Dr. T. F. Abercrombie, Commissioner of Health and Dr. M. E. Winchester, Director of County Health Work, attended the meeting. Dr. R. L. Miller, Waynesboro, read a paper on New Treatment for Malaria. Other speakers on the program were: Dr. Paul Eaton, Dr. Eugene E. Murphey, Dr. J. Victor Roule and Dr. V. P. Sydenstricker, all of Augusta.

Ocmulgee Medical Society, composed of the counties of Bleckley, Dodge and Pulaski, met at the Leeland Hotel, Eastman, February 1st. Next meeting of the society will be held at Hawkinsville, Friday evening, April 5.

Brooks County Medical Society met at Quitman, January 31. Officers were elected and installed.

Dr. and Mrs. E. A. Russell, Fitzgerald, entertained the members of Ben Hill County Medical Society at dinner on February 5.

Dr. W. R. McCoy, formerly of Folkston, has removed to Jesup.

The Board of Dougherty County Commissioners has agreed to levy a tax of one mill for a county wide malaria control campaign under the supervision of the United States Public Health Service. The U. S. P. H. S. will furnish an expert free of charge to direct the work. The county will have approximately $17,000.00 to finance the work.

Bibb County Medical Society met February 5. Dr. R. W. Richardson, Macon, made a report covering x-ray examinations of the chest of 700 school children. Dr. A. M. Collingsworth read a report of interesting clinical cases which came under his observation.

Dr. G. Lombard Kelly, Augusta, attended the seventh annual meeting of the Georgia Academy of Science recently held at Athens. He read a paper on original research work done in the department of anatomy of the University of Georgia Medical Department.

Dr. and Mrs. Carl P. Savage, Montezuma, entertained the members of the Macon County Medical Society and Woman's Auxiliary at dinner on February 16. The Scientific meeting included reports of clinical cases and discussions.

Dr. Harry E. Kleinschnidt, New York City, Director of Health Education of the National Tuberculosis Association, delivered an address on "Childhood Tuberculosis" before the twenty-first annual meeting of the Atlanta Tuberculosis Association on February 14.

Dr. John J. Mullowney, Nashville, Tenn., announces that a $2,000,000.00 model medical school for the training of negro physicians will be built at Nashville. The institution will be financed by the Rockefeller philanthropies and the Rosenwald fund. Facilities will be provided for two hundred students. Departments of dentistry and pharmacy will also be organized.

Dr. J. W. Ellis, Kennesaw, entertained the members of the Cobb County Medical Society at a four-course dinner served in the nurses' dining hall of the Marietta Hospital, Marietta, February 12.

Dr. James R. McCord, Atlanta, Professor of Obstetrics, Emory University School of Medicine, will give a post-graduate course in obstetrics at Waycross, beginning Monday, April 8. Fifty physicians in the Eleventh District have already arranged to take the course.

Dr. George A. Williams announces the removal of his offices to suite 1120 Candler Building, Atlanta.

Dr. and Mrs. H. M. Tollerson, Smithville, entertained the members of the Sumter County Medical Society at dinner on February 21.

The Glynn County Medical Society met on February 18. Officers were elected and installed for the ensuing year.

OBITUARY

Dr. John L. Brown, Camilla; member, Louisville Medical College, Louisville, Ky., 1891; aged 63, died suddenly at his home on January 30. He was born in Greensboro, N. C., moved to Camilla immediately after receiving his degree in medicine. Dr. Brown had been an active practitioner in and around his home village for 39 years. He was a member of the Mitchell County Medical Society, American Medical Association and the Presbyterian Church. Surviving him are his widow, three daughters, Mrs. H. C. Anderson, Sarasota, Fla.; Mrs. Roy K. Hobbs, Lebanon, Tenn.; Mrs. Erwin M. Ellis, Norfolk, Va.; one son, John L. Brown, student in school at Auburn, Ala. Interment in the Camilla cemetery.

James Harvey Jenkins, Thomasville; Washington University School of Medicine, St. Louis, Mo., 1878; aged 82; died at his home on January 15th of pneumonia. He was born at Princeton, Ky. Dr. Jenkins moved to Thomasville in 1884 and practiced until declining health forced him to retire. He was widely known and had many friends. Surviving him are three daughters, Mrs. Grace Hender, of Walsh, Ill.; Mrs. Laura Walker and Mrs. G. C. Sparks, both of Thomasville; one son, J. H. Jenkins, Jr., Thomasville. Funeral services were conducted by Rev. Charles M. Meeks, pastor of the Thomasville First Methodist Church.

James L. Gable, Brooks; Emory University School of Medicine, Atlanta, 1883; aged 69, died at his home January 11th after an illness of short duration. Dr. Gable was prominent in Masonic circles and one of the most beloved citizens of Fayette county. Surviving him are his widow, six daughters, Mrs. H. E. Wilson, Mrs. William Malone, Misses Vivian, Sarah, Nina and Lucile Gable; one son, Jimmie Gable, all of Brooks. Funeral services were conducted from the home by Rev. T. T. G. Lintous. Interment in Salem cemetery, at Vaughn, Georgia.

Dr. John M. Anderson, Barnesville; member, Georgia College Eclectic Medicine and Surgery, Atlanta, 1897; died at his home February 20th of pneumonia. He was the efficient secretary-treasurer of the Lamar County Medical Society for a number of years, fellow of the American Medical Association. Dr. Anderson was a prominent physician and took an active interest in all civic and religious affairs in his home community. He was past master of the Pinta Lodge of F. & A. M., formerly chairman of the board of stewards of the Methodist Church, director of the Citizens National Bank of Barnesville, member of the board of

education, and a member of the State Board of Medical Examiners of Georgia at the time of his death. Surviving him are his widow, three daughters, Miss Elizabeth Anderson, Macon; Miss Agnes Anderson, Gainesville; Miss Estelle Anderson, student at Wesleyan College, Macon; one son, John M. Anderson, Jr., Barnesville. Funeral services were conducted by Rev. Marvin Williams from the First Methodist Church and interment in the City Cemetery.

ASTHMA IN CHILDREN

(Continued from Page 123)

Of these cases, 53 were male and 19 female. The age of beginning attacks ranged from one month to nine years, and were well scattered between these times. Thirteen cases began before the age of one year, forty-one cases began before the age of nine, and in 18 cases, the age incidence was not accurately determined. There was a positive family history of some immunological phenomenon on one side in 26 cases, on both sides in 15 cases, there being a positive family history in 65 per cent.

Parents gave the cause of asthma beginning as the following diseases: Pneumonia, bronchial pneumonia, colds, whooping cough, measles, flu, and acidosis.

History showed the following diseases associated with asthma:

Angioneurotic edema, 4 cases.
Vomiting, 4 cases.
Poison oak, 3 cases.
Eczema, 17 cases.
Urticaria, 18 cases.
Marked sneezing or actual allergic coryza, 37 cases.

It is interesting to note that there was a family history of ulcer of the stomach in four cases, and in one instance, three members of one family had ulcer of the stomach. Of the 72 cases, only 53 were carried through the tests, and of this 53, 49 or 92.4 per cent gave definitely positive reactions; 4 cases showed no sensitization. The remainder of the cases did not return for the tests or were only seen in the first attack and were relieved by medicine; 6 cases reacted to one substance only; 43 cases gave reactions to two or more substances, and in some instances, there were reactions to about 30 different substances; 17 cases reacted to inhalants only, 2 reacted to foods only, while 30 reacted to both inhalants and foods.

The substances to which patients reacted are as follows:

Staph. Pye. Aur.	1	Clam	1
Muskrat fur	2	Crab	4
Barley	5	Lobster	4
Buckwheat	3	Oyster	1
Corn	6	Scallop	2
Cottonseed	3	Shrimp	4
Flaxseed	2	Almond	1
Oats	5	Brazilnut	1
Orris root	15	Chestnut	1
Rice	2	Hazelnut	2
Rye	2	Peanut	2
Wheat	12	All fish	2
Cocoa	1	All nuts	9
Coffee	1	All pollens	1
Ginger	1	Apple	3
Mustard	13	Apricot	1
Paprika	2	Banana	3
Black pepper	7	Blackberry	2
Red and green pepper	6	Cantaloupe	3
Pyrethrum	3	Cherry	4
Silk	1	Grape	1
Tobacco	3	Grapefruit	1
Yeast	1	Lemon	1
Cat hair	10	Orange	3
Chicken feather,	19	Peach	6
Cattle hair	5	Pear	2
Dog hair	5	Pineapple	3
Duck feathers	7	Plum	2
Goose feathers	1	Prune	4
Hog hair	1	Raspberry	1
Horse dander	20	Watermelon	2
Pigeon feathers	4	Artichoke	3
Rabbit hair	5	Jerusalem Art.	1
Turkey feathers	1	Asparagus	8
Ash	2	Bean	6
Hickory Pollen	2	Beet	1
Oak	2	Cabbage	6
Orchard grass	2	Carrott	3
Pine	1	Cauliflower	4
Poplar	1	Celery	6
Black walnut	3	Cucumber	1
Ragweed	19	Eggplant	6
Rye	1	Garlic	2
Timothy	2	Kidney bean	9
House dust	23	Lentils	2
Goat	5	Lima bean	5
Milk, cow	2	Onion	6
Cheese	4	Parsnip	5
Egg, whole	9	Blackeye Pea	8
Beef	2	Sweet potato	1
Chicken	1	Irish potato	4
Duck	1	Lettuce	2
Goat meat	1	Pumpkin	2
Guinea fowl	1	Radish	8
Horse meat	1	Rhubarb	4
Lamb	1	Spinach	4
Mutton	1	String bean	8
Pork	1	Squash	1
Veal	1	Tomato	12
Bluefish	1	Turnip	6

Conclusion

Some miscellaneous facts that may be of interest have been brought out in these cases.

History gave egg as the substance most often suspected of causing asthma. History of croup has not been unusual in these cases and we have the right to suspect that croup may be a phenomenon of sensitization. In several cases, there has been a definite history of either egg or milk causing repeated attacks of either asthma or other allergic phenomena in early infancy, but no skin reactions could be obtained upon repeated tests on these particular patients. One case gave a history of a sneezing attack followed by convulsions shortly after eating egg for the first time at the age of two. In one case, there had been discovered that aspirin would always relieve the attack of asthma. In one case showing no sensitization, the asthma was completely relieved by x-ray treatment for enlarged hilus glands.

PROLOGUE AND EPILOGUE OF THE AMERICAN MEDICAL ASSOCIATION CONVENTION

This summer the American Medical Association Convention in Portland, Ore., July 7th to the 12th, is going to take its cue from Chambers of Commerce confabs, Hospital Clinic congresses and American Legion pow-wows, that is, offer to their delegates a variety of interesting pre and post-convention tours.

Stately Portland is situated in the fascinating West, or rather Northwest, at the far end of Pioneer Trails, covered wagon routes, redskin warpaths, and in some of the most gorgeous natural scenery of this country, or any country. And since we must travel through this wonder-laden West on our way to the Convention, why not really see it? Why not travel more leisurely, stop over at interesting points, take sightseeing trips, and perhaps play a few holes of golf on the famous links en route? We shall be in the congenial company of our good friends and true, the Southern delegates to the Medical Convention.

The American Express Company has been authorized to handle our travel arrangements, and they have arranged a most interesting route to Portland.

We leave Atlanta on June 28th, arrive at Chicago the next day, and at St. Paul on the 30th. We take a sight-seeing tour of this lovely city of wide boulevards and beautiful homes, and leave from Minneapolis for Banff, internationally famed resort in the majestic Canadian Rockies. Banff bids us welcome, and how we enjoy its clear sunshine and exhilirating air, its sublime and romantic scenery, its vivid panoramas. Automobiles meet us on our arrival and take us for a trip visiting fascinating points of interest, Bow Falls, Tunnel Mountain, Buffalo Park and the Zoo, the Cave and the Basin, and the golf links. The next day we drive to Johnston Canyon, over charming

Morraine Lake in the Canadian Rockies

mountain roads, and gasp in amazement at the jewelled lakes in the clouds, the towering ice-clad peaks, the friendly wild animals and the Alpine meadows carpeted with glowing flowers. Onward to Lake Louise!

Lake Louise, called "the loveliest lake in all the world" is like a shimmering jewel set in a rocky diadem. From here we motor for about 22 miles into the heart of the Rockies, visiting beautiful Morraine Lake and the enchanting Valley of Ten Peaks.

Vancouver, Canada's fourth largest city, is our next port o' call. Here we embark on a steamer for the daylight sail down Puget Sound. How relaxing to lean back in our comfortable deck chairs, breathe the invigorating salt air until we glimpse Victoria, that "smiling bit of old England." We take a comprehensive tour around the city and return again to our steamer, which brings us to Seattle. We board a sleeper here, and arrive in Portland early in the morning. It is now July 7th, and we are just in time for the opening of the Medical Convention. And we have had a glorious vacation in getting here.

After the convention ends on July 12th, a number of excellently arranged tours to bring us home again have been planned. Some follow the trails of the National Parks; others trek out to golden California, in fact there is one to suit your particular taste in journeying. There is another item in this issue in which these return trips are outlined, and prices are also given. In next month's issue of this magazine the optional return tours shall be described more fully. But you are invited to write in; complete information, costs, etc., will promptly be furnished. Making your plans early naturally assures you of the choicest accommodations.

GEORGIA RAILWAY SURGEONS

The Association of Georgia Railway Surgeons will be held in the Convention Hall of the Dempsey Hotel Tuesday, May 7th at 11 o'clock, Eastern time.

The Scientific program on industrial surgery and other important subjects, will be sent out ten or fifteen days before the meeting.

Portland, Oregon

NATIONAL PARKS, CANADIAN ROCKIES AND CALIFORNIA

Awaits you, the delegates to the American Medical Association Convention in Portland, Ore., this summer. For you will not want to go hurtling through the country to your destination without viewing enroute the marvels of the West. In this way you can combine an ideal summer vacation with attendance at the Convention.

In order to enable medical men, their families and friends, to avail themselves of this travel opportunity, we have authorized the American Express Company to arrange tours to precede and follow the Convention. They have prepared a number of fascinating itineraries, which we are outlining briefly:

The Tour to Portland. Leave Southern and Eastern cities on June 28th. Travel through Chicago, St. Paul and Minneapolis to Banff, beauty spot of the Canadian Rockies. About two days of comprehensive sight-seeing here, and we journey on to lovely Lake Louise, nestling in the heart of snow-crowned peaks. Onward to Vancouver, then a delightful daylight sail down Puget Sound to Victoria and on to Seattle. Finally we reach Portland early in the morning of July 7th, the day on which the Convention begins. Remain in Portland until July 12th, end of meeting.

The homeward journey: You can have your choice of six different routes on the return trip.

Optional Return Trip No. 1 goes through Gardiner, Yellowstone National Park, Mammoth Hot Springs and over the scenic Cody Road. Chicago is reached July 20th, Southern and Eastern points one day later.

Optional Return Trip No. 2 tours Glacier National Park. Arrive Chicago July 18th; southern and eastern cities next day.

Optional Return Trip No. 3 tours Yellowstone National Park; Salt Lake City; passes through Royal Gorge; visits Colorado Springs. Get to Chicago July 23rd; east and south on 24th.

Optional Return Trip No. 4 journeys to California; San Francisco, Los Angeles, Hollywood and the beaches. Grand Canyon, called America's greatest wonder, is also visited. Chicago is reached on July 21st; eastern and southern cities one day later.

Optional Return Trip No. 5 comprises direct return from Portland to destination by rail.

Optional Return Trip No. 6 comprises return to destination by rail via San Francisco.

Prices depend upon the return trip chosen:

Atlanta to Atlanta—Main Tour and Return Trip 1—$355.00.

Atlanta to Atlanta—Main Tour and Return Trip 2—$345.75.

Atlanta to Atlanta—Main Tour and Return Trip 3—$383.00.

Atlanta to Atlanta—Main Tour and Return Trip 4—$370.40.

Atlanta to Atlanta—Main Tour and Return Trip 5—$250.25.

Atlanta to Atlanta—Main Tour and Return Trip 6—$266.50.

Whatever tour you choose, whatever part of this broad land of ours you wish to explore, or perhaps to renew its acquaintance, you will find an expertly arranged itinerary, every detail of which has been planned to assure your comfort, interest, and enjoyment!

If you write, phone or call at either of the addresses listed below, literature giving complete information and rates will be sent you promptly.

AMERICAN EXPRESS COMPANY
91 Luckie St., N. W.,
Atlanta, Georgia.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA,
139 Forrest Avenue, N. E.
Atlanta, Georgia.

MACON

(Continued from Page 132)

Three million dollar repair shops of Central of Georgia Railway.

Indian Mounds among the most remarkable and interesting in North America.

Five hundred acres of parks and playgrounds in the city.

INTRA-ABDOMINAL INFLAMMATION IN RELATION TO DIABETIC ACIDOSIS WITH LEUKOCYTOSIS

In four cases presented by James H. Smith, Richmond, Va. (Journal A. M. A., Jan. 26, 1929), there is suggestive evidence that leukocytosis may be due to diabetic acidosis uncomplicated by an inflammatory lesion. On the other hand, it seems clear that a condition requiring surgical relief may be the underlying factor. For the present it would seem that, in diabetic acidosis, localized abdominal tenderness and rigidity should be accorded their classic surgical significance, but antiketosis must rank with asepsis in the surgical conscience.

AMERICAN MEDICAL ASSOCIATION MEETING TOURS AND COSTS

Itinerary to Portland and Six Optional Returns From Portland

June 28th—Leave Atlanta, Ga., at 6:30 P. M "Dixie Limited."

June 29th—Arrive Chicago at 2:35 P. M., leaving via the C. & N. W. R. R. at 6:30 P. M. Party convenes at Chicago & Northwestern Station.

June 30th—Arrive St. Paul at 7:05 A. M. Auto sightseeing tour of the city. And leave Minneapolis at 11:40 A. M. via Soo Line.

July 1st—Enroute.

July 2nd—Arrive Banff, via the Canadian Pacific line at 8:05 A. M. Automobiles will meet us upon our arrival and take us for a trip, visiting Bow Falls, Tunnel Mountain, Buffalo Park and the Zoo, the Cave and the Basin, and the golf links. The afternoon will be at disposal of the tour members. Sleeping accommodations will be provided in our special Pullman car.

July 3rd—At Banff. A motor trip in the morning will take us to Johnston Canyon with a 45-minute stopover there. There will be frequent opportunities to see wild life. Automobiles will take us to Lake Louise.

July 4th—At Lake Louise. A wonderful motor drive of 22 miles into the heart of the main part of the Rockies, visiting Moraine Lake and the Valley of Ten Peaks.

July 5th—Leave Lake Louise via the Canadian Pacific at 9:55 A. M.

July 6th—Arrive Vancouver at 7:45 A. M. connecting with steamer leaving at 10:30 A. M. for daylight sail down Puget Sound. Arrive Victoria at 2:30 P. M., where automobiles will be waiting to take us for a sight-seeing trip about the city, returning us to steamer in time to sail at 4:30 P. M. Arrive at Seattle 8:30 P. M., and leave via Union Pacific Line at 11:15 P. M.

July 7th—Arrive Portland at 6:15 A. M. Room with bath at Hotel Multnomah or Imperial.

Optional Return No. 1-A.

July 12th—Leave Portland via Northern Pacific at 8:00 P. M.

July 13th—Enroute.

July 14th—Arrive Gardner at 11:15 A. M., where connection is made for auto tour consuming 4 1-2 days through Yellowstone National Park. Stopovers will be made nights at Mammoth Hot Springs, Old Faithful and Canyon Lodges. Our exit via Cody Road will be a fitting climax to this delightful tour.

July 18th—Leave Cody via the Northern Pacific at 8:30 P. M.

July 19th—Enroute.

July 20th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."

July 21st—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 2-B.

July 12th—Leave Portland via S. P. & S. R. R. at 8:00 P. M.

July 13th—Arrive Glacier Park at 9:12 P. M., stopping at Glacier Park Hotel. A 3-day tour of the Park, dividing our time between Many Glacier Hotel, Going-to-the-Sun Chalet and Glacier Hotel.

July 16th—Leave Glacier Park via Great Northern at 9:12 P. M.

July 17th—Enroute.

July 18th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."

July 19th—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 3-C.

July 12th—Leave Portland via Union Pacific at 4:00 P. M.

July 13th—Enroute.

July 14th—Arrive West Yellowstone at 7:30 A. M., connecting with motor coach for 4 1-2 day tour of Yellowstone National Park, stopping over nights at Old Faithful, Grand Canyon and Mammoth Hot Springs Lodges.

July 18th—Leave West Yellowstone at 7:00 P. M.

July 19th—Arrive Salt Lake City at 7:30 A. M. Automobiles will take us for trip around city and visit will be made to the Mormon Tabernacle. Luncheon will be served at the Utah Hotel. The afternoon will be at disposal of members, and leave Salt Lake City via D. & R. G. R. R. at 6:00 P. M.

July 20th—Pass through the Royal Gorge in the early afternoon. Arrive Colorado Springs at 6:20 P. M.

July 21st—Automobiles will take us for a trip to the Garden of the Gods, Cave of the Winds, and Seven Falls. Leave Colorado Springs via Rock Island Lines at 8:30 P. M.
July 22nd—Enroute.
July 23rd—Arrive Chicago at 6:59 A. M. and leave at 10:00 A. M. via "The Flamingo."
July 24th—Arrive Atlanta, Ga., at 8:40 A. M.

Optional Return No. 4-D

July 12th—Leave Portland via Southern Pacific at 9:00 P. M.
July 13th—Enroute.
July 14th—Arrive San Francisco at 7:50 A. M., stop at St. Francis Hotel.
July 15th—Leave San Francisco via Southern Pacific at 8:00 P. M.
July 16th—Arrive Los Angeles at 9:30 A. M. Room with bath at Hotel Clark. Auto tour to Hollywood and the beaches included.
July 17th—Leave Los Angeles via Santa Fe R. R. at 12:01 P. M. (Noon.)
July 18th—Arrive Grand Canyon at 8:20 A. M. Breakfast, luncheon and dinner at El Tovar Hotel. Auto drive along Hermit Rim Road. Leave Grand Canyon via Santa Fe at 7:35 P. M.
July 19th and 20th—Enroute.
July 21st—Arrive Chicago at 10:00 A. M., and leave at 2:00 P. M. via "Dixie Limited."
July 22nd—Arrive Atlanta, Ga., at 8:55 A. M.

Optional Return No. 5-E.

This comprises direct return to Atlanta by rail.

Optional Return No. 6-F.

This comprises return to Atlanta by rail via San Francisco

Prices

Atlanta to Atlanta—Tour No. 1 and 1-A	$355.00
Atlanta to Atlanta—Tour No. 1 and 2-B	345.75
Atlanta to Atlanta—Tour No. 1 and 3-C	383.00
Atlanta to Atlanta—Tour No. 1 and 4-D	370.40
Atlanta to Atlanta—Tour No. 1 and 5-E	250.25
Atlanta to Atlanta—Tour No. 1 and 6-F	266.50

Itinerary to Portland and six optional returns from Portland include all cost of transportation, Pulman, hotels and meals to Portland; room in one of the best hotels at Portland while there; transportation, and Pullman with meals at Yellowstone Park on return. On return trips 5E and 6F only rail transportation in included.

For reservations address: American Express Company, 91 Luckie St., N. W., Atlanta, Ga. *Or* Medical Association of Georgia, 139 Forrest Avenue, N. E., Atlanta, Georgia.

IN PNEUMONIA START TREATMENT EARLY

In the Optochin Base treatment of pneumonia it is of the utmost importance to begin treatment at the earliest possible moment. Every hour of delay is to the disadvantage of the patient.

The theory upon which the treatment of pneumonia with Optochin Base is founded is as follows:

The maximum bactericidal power of the remedy must be maintained continuously for a definite period —1 to 3 days—employing the minimum quantity of the remedy necessary for the purpose. It was found in practice that, provided Optochin Base is used, and given in doses of 4 grains every 5 hours, day and night, and further, provided the treatment is begun within 24 hours, or at least not later than the second day after the onset of the disease, the results are all that could be wished. The fever abates rapidly, the course of the disease is shortened and rendered milder, and the patients experience a sensation of euphoria, while the appetite and general condition improve.

The base is used because, being practically insoluble in water, it is but gradually taken up into the blood circulation. With every dose of Optochin Base about 5 ounces of milk are given. The milk prevents the too rapid formation of the more soluble Optochin Hydrochloride by the action of the hydrochloric acid secreted and thus assists in maintaining a more uniform optimum concentration of the remedy in the blood. No other food or drink is given during the 3 days' treatment.

Hotel Lanier

MACON, GEORGIA

— Fire Proof —

Excellent Cafe

RATES $1.50 and up

LET US COLLECT YOUR SLOW ACCOUNTS FOR YOU.

COMMISSIONS AS LOW AS 25%. NO OTHER CHARGES.

Endorsed by American Medical Association and State Societies. References: Bradstreets; Chamber of Commerce; Commerce Trust Co. or publishers of this journal. Satisfied clients everywhere.

SEND FOR LIST BLANKS

Physicians & Surgeons Adjusting Association

RAILWAY EXCHANGE BUILDING. KANSAS CITY, MO.

SITUATIONS WANTED

WANTED: Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians', 320 N. Michigan Ave., Chicago, member The Chicago Association of Commerce.

Doctors' Exchange - - Nurses' Registry

Also known as Physicians and Surgeons' Exchange

1001 Ponce de Leon Ave., N. E., Atlanta (3 Phones) Hemlock 6300. Nurses for any kind of case anywhere. Registered Graduate, Undergraduate and Practical. White, colored and male.

Hourly Nurses and Masseuses.

"IMPARTIAL - - ETHICAL - EFFICIENT"

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | April, 1929 | No. 4

SPINAL ANESTHESIA IN OBSTETRICS

J. W. THURMOND,* M.D.,
Augusta

The surgical advantages of spinal anesthesia have been known for many years, and for several years it has been practiced in operative obstetrics, but not until recently has the mother experienced a painless normal second stage of labor by means of this anesthesia. Upon entering the obstetrical service at the Jersey City Hospital last summer I was somewhat surprised to see that the large majority of the obstetrical patients were given spinal anesthesia. Having had but very little experience during my interneship with spinal anesthesia I was quite interested in this work, and was soon convinced that this was the ideal way for a woman to have a painless delivery.

The danger which has been so much feared by the practitioner in spinal anesthesia has practically been eliminated by limiting the injection to the third or fourth lumbar interspaces, and the dosage to the relatively small one of from fifty to one-hundred milligrams of novocaine. Also by the injection of ephedrine sulphate in three-fourth grain doses five minutes before the spinal injection—its effect similar to adrenalin except longer duration. We have had no cause to be concerned over the most obvious of the deleterious phenomena of spinal anesthesia, that is—excessive blood pressure fall. Therefore, from our experience we think that spinal anesthesia is definitely safe as we use it: that it is almost uniformly efficacious; that it facilitates the obstetrician's work in quieting the patient, in minimized bleeding, in relaxation of soft parts, and in the conscious co-operation of the patient as no other anesthetic does. Also it is absolutely not deleterious to the infant. The asphyxiation so much dreaded from the use of morphine in the first stage is largely due to the additional influence of inhalation narcosis superadded to the effect of the morphine. We have not seen babies born under spinal anesthesia exhibit any tendency to asphyxiation, irrespective of the previous use of other drugs, except where such tendency was definitely attributable to some other factor, such as trauma. Therefore—we are sure that the restriction of the use of morphine as a first stage analgesic may be somewhat modified by its use.

The method is most acceptable to the patient, many are most extravagant in expressing their appreciation of it. Even those who have received it after previous experience with various inhalation anesthetics definitely prefer it. The only dissatisfaction on the part of the patient has been in that small proportion of cases in which the method has failed, due invariably to faulty technic of administration.

Spinal anesthesia is certainly by far the safest method at our disposal in the handicapped patients, those with pneumonia, tuberculosis, bronchitis, thyroid disease, heart disease, diabetes, nephritis, and the various toxemias of pregnancy. If its availability were limited to these cases alone, its place in obstetrics would be important and secure.

Technic of Administration. In multigravidae—the presenting part should be fairly well engaged, "descended to level of spines"; in primigravidae, it should have descended onto the pelvic floor. Patient is put on delivery table, placed on either side, back painted with iodine and alcohol as in regular spinal puncture preparation and the skin and underlying tissue is procanized with a little 1 per cent procaine, usually there is very little discomfort to the patient in doing the puncture as her labor pains are far more severe

*Resident Obstetrician of the University Hospital.

than the stick she gets. A spinal puncture done at the fourth lumbar interspace with a very small lumbar puncture needle—20-22 gauge. After entering the spinal canal about one or one and one-half c.c. of spinal fluid is allowed to run out in the sterile ampule containing 50 mgs. of crystaline novocaine. The novocaine is dissolved with the spinal fluid and re-injected into the spinal canal. Needle removed and patient placed in lithotomy position with head slightly elevated and draped for delivery. The blood pressure and pulse being taken every five minutes by an assistant. In from two to four minutes there will be complete anesthesia of legs and perineum and usually extends up to umbilicus. The uterus continues to contract as was actually indicated by manometric estimation of the pressure transmitted through the stem of a filled hydrostatic bag placed within the uterus, there appears to be little effect on either the frequency or the force of the uterine contractions. It is possible that this is due to the low level of the injection, higher injection would affect a larger number of the white rami communicantes of the cord, and thus more completely block the efferent inhibitory impulses to the sympathetic ganglia.

As there is no more pain experienced by the patient, she naturally stops "bearing down." The hand is placed on abdomen over the sterile draping and when there is felt a uterine contraction she is told to push down thereby putting her auxillary forces into action. If no dystocia is found she may be given one-half c.c. of pituitrin intramuscularly. There is no pain or apparent exhaustion. At this stage of the management episiotomy may be employed if indicated.

If spontaneous delivery does not occur, or be imminent, at the end of thirty minutes after the spinal injection, or if at any time the uterus should appear to be tetanic without advancement of the presenting part, or the fetal heart shows evidence of distress the labor should be terminated artificially.

Observations in several cases show that the anesthetic begins at the lower end of the lower extremities and progressively ascends; it recedes from above downwards, disappearing last from the toes.

At the level of the perineum, which is the ideal level for the more frequent operative obstetric procedures, the duration of anesthesia was from forty to eighty minutes. The patient will complain of her feet being asleep for about two hours from time of injection —this should always be explained to her so as not to cause any uneasiness.

One of the basic problems of spinal anesthesia concerns the extent of diffusion, because its greater dangers are inherent in the effects of uncontrolled diffusion. Diffusion there must be, of course, or there would be no useful degree of anesthesia.

Numerous factors have been held to govern its extent:

1. The specific gravity of the menstrum, and the posture of the patient in relation to it.
2. The level of the injection.
3. The amount of diluent used.
4. The force of the injection.
5. The practice of re-aspiration and re-injection.
6. The dose of the anesthetic.

We find here in the University Hospital, that when the low injection L-4 is made and from 50 to 75 mgs. of novocaine injected without re-aspirating that the anesthesia is very seldom above the umbilicus, and in the larger majority of cases only just above symphysis.

In several cases re-aspiration and re-injection was done and anesthesia went up to mid-sternum, of course this is not needed in obstetrical work except where a Cesarean section is to be done.

A dozen cases will be given to show the average blood pressure before, during, and after delivery.

The above cases show that the blood pressure is raised from five to fifteen points by the use of ephedrine sulphate, grain three-fourth; in the hypertension cases it was omitted.

We do not believe that spinal anesthesia should be given to all obstetrical cases, but in the handicapped cases as mentioned above

TABLE OF CASES

No.	Age	Para.	Amount Novocaine	Delivery	B. P. Before	B. P. During	B. P. After	Remarks
1	23	1	60 mgs.	Mid Forceps	100-70	125-80	115-75	Anesthesia up to umbilicus,—disappeared in 1 hr. 15 min. Uneventful recovery.
2	20	1	50 mgs.	Normal Delivery	115-70	130-75	120-70	Uterine contractions continued hut there was absolutely no pain to patient. Uneventful recovery.
3	21	1	65 mgs.	Low Forceps	130-80	140-80	120-80	Perineum repaired of 2nd degree laceration. Anesthesia for 1 hour. Uneventful recovery.
4	40	1	65 mgs.	Mid Forceps	142-90	135-90	130-90	Cervix was only half dilated. Finished manually, head rotated from R. O. P. to occiput Anesthesia to umbilicus. No ephedrine due to hypertension.
5	28	2	50 mgs.	Mid Forceps	108-65	110-70	110-70	R. O. P. position. Head rotated. Anesthesia to umbilicus. Uneventful recovery.
6	16	1	50 mgs.	Low Forceps	150-95	140-90	120-90	R. O. P. position. Head rotated. Patient very sick with influenza and pneumonia. Died 3 days later from pneumonia.
7	18	1	50 mgs.	Normal	115-75	125-70	110-70	Normal delivery. Anesthesia to just above symphysis. Uneventful recovery.
8	23	1	75 mgs.	1--Low Forceps 2--Breach Delivery	118-70	130-75	110-70	Twins pregnancy. Premature babies, one baby died several hours later, other doing well. No pain. Mother had flu. Uneventful recovery.
9	40	1	60 mgs.	Low Forceps	122-75	134-75	115-70	Occiput posterior delivered in this position, episiotomy done. No pain. Uneventful recovery.
10	24	1	50 mgs.	Normal	125-80	135-80	115-80	Mother very sick with influenza. Normal delivery. No pain. Uneventful recovery.
11	25	1	60 mgs.	Low Forceps	160-95	130-90	120-80	No ephedrine due to nephritic toxemia. Episiotomy done. Uneventful recovery.
12	17	1	60 mgs.	Mid Forceps on Both	135-80	140-85	120-80	Twin pregnancy. Perineum repaired. No pain. Uneventful recovery.

we do think it is the ideal anesthesia. So far we have only seen one unpleasant symptom —that was a severe occipital frontal headache, a patient with toxemia and hypertension suffered with for several hours. It was relieved by the intravenous injection of 100 c.c. of 0.5 per cent saline.

Your interest is invited, and your help solicited in the perfection of the usefulness and safety of an anesthetic for elimination of the terrific ordeal of childbirth.

REFERENCES

1. Cosgrove, S. A.—Spinal Anesthesia in Obstetrics. American Journal of Surgery, December, 1928.
2. Babcock, W. W.—Spinal Anesthesia in Gynecology, Obstetrics, and Abdominal Surgery, J. A. M. A., October 11, 1912.
3. Pitkin, G. P.—Controllable Spinal Anesthesia in Obstetrics. Surgery, Gynecology, and Obstetrics.
4. Babcock, W. W.—Spinal Anesthesia, An Experience of Twenty-Four years. American Journal of Surgery. December, 1928.
5. Evans, C. H.—Possible Complications with Spinal Anesthesia, Their Recognition and the Measures Employed to Prevent and to Combat Them. A. M. S., December, 1928.
6. Steel, W. A.—Blood Pressure Maintenance in Spinal Anesthesia. J. A. M. A., 84:79, 1925.

TULAREMIA FROM THE MUSKRAT

The cases of ulceroglandular tularemia reported by Harold Schwartz, Butte, Mont. (Journal A. M. A., April 6, 1929), reveal a new source of infection: both are directly attributable to the muskrat, having resulted from the skinning of a muskrat to obtain the pelt.

GAS BACILLUS INFECTION

Case Report

BEN HILL CLIFTON,* M.D.,
Atlanta

A relative increase in the number of gas bacillus infections due, no doubt, to the increase in traumatic injuries, coupled with the heroic measures necessary in this case to save the life of the patient, makes the case seem worthy of report.

Case Report

T. D., white, male, age 13, while playing in the woods, fell and sustained a compound fracture of the lower end of the right ulnar and radius on January 17, 1927, about 6 P. M. He was admitted to the Grady Hospital, and the injury properly handled, receiving the usual immunizing dose of antitetanic serum. The next morning he was seen by Dr. Lawson Thornton, visiting orthopedic surgeon, about 10 A. M. at which time his temperature was 101.4, pulse 80. There was marked swelling and definite crepitation of the arm and shoulder and in the axillary space. The condition was promptly recognized and he was referred to the general surgical service. The x-ray at this time revealed gas in the tissue of the axillary region and also above the clavicle.

The rapidity with which the infection was spreading convinced us that it was a very malignant type, and about all we could hope for would be to save the boy's life after sacrificing his arm. At about 12 o'clock on January 18, eighteen hours after the injury, a Guillotine shoulder joint disarticulation was done under ethylene anesthesia. Incisions were also made upward toward the clavicular attachments of the pectoral muscles and downward through the axillary space on to the chest. All bleeders were caught and the hemostats were left in place. Several Dakin tubes were inserted and the wound dressed lightly with gauze, the whole procedure requiring about twenty minutes. He was returned to the ward with pulse around 160 with fair volume, and was given, at the time, 100 c.c. of Perfringens antitoxin intravenously, also, 400 cc. of 10 per cent glucose solution in saline.

Blood from the patient on this date inoculated into the peritoneal cavity of a guinea pig, showed no bacterial growth. Smear from the wound on anaerobic culture produced Bacillus Aerogenes Capsulitis. (Reported several days later.)

Figure I
Morning after admission to hospital showing gas in axillary space.

Dakin's solution was instilled into the wound through tubes every one-half hour. Proper stimulation, diet, and daily dressings were ordered. On January 19th, 50 cc. of Perfringens antitoxin was given intravenously. Temperature ranged from 100 to 102, pulse 90 to 130, and on January 22nd his temperature reached normal. On January 23rd his temperature reached 102 so we gave him 50 cc. more of Perfringens antitoxin intramuscularly. Following this, a severe serum rash appeared which was very annoying but not serious.

On January 25th his temperature was higher, and by carefully investigating the wound, it was certain that there were infected and sloughing areas between and above the pectoral muscles which were not draining. With my finger these areas were freely and painlessly opened and more tubes inserted. The major portion of the hemostats had been released by this time and the situation seemed somewhat favorable.

At about 10 P. M. on the 26th, after having our hopes somewhat strengthened, we were much disappointed to see that the wound was bleeding. The dressing was changed by the house doctor and several small oozing points caught, but the definite source was not found. Dakin's solution irrigation was changed to normal salt solution. During the next three days there occurred several small hemorrhages which were controlled by catching with the forceps here and there in the mushy necrotic tissue and by pressure bandages.

On the 29th a severe hemorrhage occurred.

*Visiting surgeon to Georgia Baptist Hospital and Grady Memorial Hospital.

Figure II

About five weeks after injury, showing extensive granulating surface.

Figure III

Fourteen months after injury.

and it was reasonably certain then that our chief problem was to control bleeding as the infection seemed to be under control. (No further extension). As the invaded tissue sloughed the blood vessels were not spared. At this time the bleeding had been so constant and persistent the red cells had dropped to 2,260,000 with a hemoglobin of 50 per cent, and coagulation time was three minutes and 55 seconds. A transfusion of 180 cc. of blood was made. Within three hours there occurred another copious hemorrhage. Following this, an attempt to open up the space above the clavicle and clamp the subclavian artery was made, but we were halted by an enormous gush of blood coming from deep in the neck near the region of the junction of the sub-clavian and jugular veins. After packing this tight with gauze, we made our retreat, feeling like the situation was hopeless. Fluids and glucose solution were given following this, and all along as indicated. He reacted very well from this and there was just enough oozing within the next 48 hours to saturate the dressing.

On January 31st red cells were 1,060,000 and hemoglobin 25 per cent. February 2nd another small hemorrhage occurred, and a transfusion of 150 cc. of blood was made. Red cells were 1,270,000 and hemoglobin 35 per cent. February 3rd there were two more small hemorrhages and the pulse was decidedly weaker. February 4th another transfusion of 310 cc. of blood was given, but immediately following, while changing the dressing, another copious hemorrhage occurred. Apparently he was losing more blood than we were transfusing. The red cells were 1,100,000 and hemoglobin was 30 per cent. His condition was very poor. Pulse 150 and very thready. February 5th another transfusion of 200 cc. was given. No bleeding since the previous day but the patient was delirious for the first time and the pulse was almost imperceptible. On the morning of February 6th the patient was decidedly improved and rational. Temperature 100, pulse 120, but around 2 P. M. another severe hemorrhage occurred and, of course, his condition changed back as usual.

So far, since January 26th, it had been a see-saw game between us on the one hand, trying to keep enough blood transfused to hold him within the safety zone, and the sloughing blood vessels, leaking it out. We recognized our utter helplessness unless we

could clamp the sub-clavian artery. The mother, who was very intelligent, recognized the boy's predicament and our helplessness, and, after it was thoroughly explained to her that the attempt might prove fatal, she gave us her consent to proceed. A transfusion of 390 cc. of blood was given and the donor kept prepared for a second transfusion if necessary. Under local anesthesia both pectoral muscles were cut, turned up, and, through a geyser of blood, the sub-clavian artery was clamped near its origin. Following this, an additional clamp was placed just above the first. The bleeding, although it lasted only a few seconds, was more than we had transfused, consequently, his condition was extremely bad. Another transfusion of 200 cc. was given immediately.

From then on his progress was slow but steady and, after our clamps dropped off on the eight day with no more bleeding, we felt certain he would survive. The necrotic tissue gradually sloughed off, leaving a clean granulating surface which gradually filled in. He was transferred home on March 7, 1928, and returned for a sliding skin graft on March 26th, after culture from the wound was negative.

Comment

1. A case of malignant gas bacillus infection apparently influenced by Perfringens antitoxin because the infection had extended above our operative field, although, every effort was made to get as free drainage as possible.

2. Secondary hemorrhages due to sloughing of invaded tissue necessitating repeated blood transfusions.

3. Had we less sang-froid and the patient less fortitude, we feel certain he would have died.

FELONS, ACUTE LYMPHANGITIS AND TENDON SHEATH INFECTIONS

The differential diagnosois of a felon, an acute lymphangitis and a tendon sheath infection Sumner L. Koch, Chicago (Journal A. M. A., April 6, 1929), says depends on definite symptoms and signs which can be readily recognized if they are kept in mind and sought for. To make such a diagnosis is of the utmost importance, for the avoidance of bone destruction in the case of a felon and of tendon necrosis in the case of a tendon sheath infection depends on early incision and drainage. In the treatment of an acute lymphangitis, on the other hand, abstinence from surgical treatment is imperative if one is to avoid the possibility of converting a local infection into a general septicemia.

A CONSIDERATION OF THE ELDERLY PRIMIPARA*

C. THOMPSON, M.D.,
Millen

During my early medical career I soon gained the impression that the first pregnancy and labor occurring in an older woman was attended by an increased hazard, but I had no very definite idea of just what that hazard consisted and what it amounted to. I was aware, also, that the public was under the assumption that labor in these women was more dangerous. Because of the increasing number of these cases occurring in my practice, and because of the many serious complications and unsatisfactory results, my interest has been focused on them. I have made a study of the subject, and I wonder if the medical profession generally is cognizant of the greatly increased hazard these women as a group sustain. I have drawn freely on the available literature, and no originality is claimed for the ideas contained in this paper.

At the outset, let it be emphasized that every pregnant woman should be studied individually and her case treated on its own merits. It is because of this individual variation that the authors who have written on the subject vary so widely in their observations and conclusions. Actually one woman may be structurally and physiologically as old at 22 as another at 40. It has been our effort to determine how and why these cases are more difficult, and to determine the best line of management for them.

Usually at 26 the woman has passed the optimum time for her first pregnancy and labor; and at least one-third of the women above this age will have complications. With each additional year, the undertaking becomes more and more hazardous both to herself and her foetus. A vast array of statistics by various authors go to prove that there is a higher percentage of contracted pelves. The woman herself is much more apt to be substandard physically and the maternal soft parts are more rigid and inelastic. Weak birth pains

*Read before the First District Medical Association, March 14, 1929, Statesboro, Georgia.

are characteristic at this age. The bag of water ruptures prematurely three times more frequently and pregnancy goes over time more often. Also, the older the primipara, the larger will be the foetus at term.

For a better understanding of these cases I have divided them into three classes:

(1st) The average, or above the average in physical fitness.

(2nd) The adipose hypo-plastic type.

(3rd) The asthenic type.

The first class needs no description, except that they are prone to have a rigid, inelastic birth canal, resulting in a prolonged labor, with deep lacerations.

The second type are those women with short neck, short trunk, and short thighs, with a large cushion of fat. They have large, fat breasts, with little parenchyma. The genital hair is scanty and of a fine texture, and the pigmentation of pregnancy is almost completely lacking. These women have poorly developed, rigid genitals and are especially prone to have weak, ineffectual birth pains, with early exhaustion and distention. This type often maintains a negative psychic state during labor. She cries constantly, and is overcome with fear of impending disaster.

The asthenic type has a long, slender skeleton, the skin is pale, and they are weak and emaciated. They have a long neck, a narrow, flat chest, and gastro-enteroptosis is prominent. These women are infantile and undeveloped throughout; they menstruate late and it is very scanty, and they have an early menopause. The uterine muscle is thin and weak and it is easily and early exhausted.

Not all cases fall definitely into one of these three classes, and many of them are on the border line. There are both slight and profound degrees of hypo-plasia and asthenia; but if the three types are kept definitely in mind, it will aid materially in estimating the individual risk.

Although the prognosis for delivery become more and more hazardous with increasing age, the constitution of the woman, and the condition of her genital tract are the most fundamental. That the complications of delivery increase with age, is not because the woman is too old, but because the hypo-plastic, asthenic woman does not become pregnant 'til in later years, even though she has been married for a long time. This accounts for the observation that the longer a woman has been married before she becomes pregnant, the more frequent and severe will be the complications, and the later the beginning of menstruation, the more frequent and severe will be the complications during delivery.

These women are more subject to nausea, and frequently do not gain in appetite and strength, but come to labor in a weakened condition. They are more subject to eclampsia and nephritis. The heart muscle is prone to degeneration and requires attention. The mental attitude is often bad and she is in constant dread from her pregnancy.

The increase in pelvic contractures in elderly primipara is most often the funnel type. Although good birth pains, and strong muscles generally overcome in a surprising manner, this bony hindrance, the hypo-plastic and infantile woman is seriously handicapped, and operation ultimately becomes urgent. The rigidity of the cervix and perineum is within itself more frequently a major hindrance and especially because of the increased size and hardness of the foetal head. The cervix may be maintained as a hard, unyielding ring that lacerates deeply on manual stretching. Indeed, it has been known to tear off from the uterine body without rupture of the ring. The laceration of the perineum is more often deep; and the narrow vagina may tear throughout its whole extent. This deep laceration of the vagina has not been sufficiently emphasized and I have repeatedly seen the fat in the ischiorectal fossa exposed. Bleeding is violent and a proper repair of such a tear requires the greatest skill with the best facilities. Complete recovery from such an injury never takes place.

Premature rupture of the amniotic sac is found to occur three times as often in the elderly primipara as in younger women. This is important, not alone because the delivery will be longer and more difficult, but because it has been found by cultures taken at Caesarean section that the longer time that elapses after rupture of the bag of water,

the more often the intra-uterine contents will become unsterile and infected, so that if the case is set for section, it should be done immediately the accident takes place.

The statistics of numerous authors show that there is a definite relation between the increased age of the mother and the increased weight and length of her foetus at term. The head becomes hard and unyielding, so that a woman with normal pelvis and genital tract may have a third degree of laceration. It is also characteristic of the elderly primipara that a very high percentage of them go over term.

The weak birth pains that are so often encountered in these women may be, and frequently are, a critical major handicap. The uterine muscle becomes early exhausted, with little or no progress, and atony and hemorrhage is to be expected in the third stage of labor. It is often difficult to induce labor and keep it in progress in these cases; and the uterine muscle becomes exhausted much the same as does the heart muscle. All efforts at rejuvenating and increasing the pains may fail, e.g., the bag, ergot, pituitrin, 40 per cent glucose intravenously, and prolonged rest from morphine. These cases may show early atony and distention of the bladder and intestines; such a case, in my experience, is especially apt to develop acute dilitation of the stomach. The weak birth pains are not caused by the distended bladder and intestines, but they all have a common cause, viz: a change in vagus tone. The prognosis in such a case is very bad, and demands the maximum aid possible.

Many things contribute to make the prognosis for the baby increasingly bad. The child may be expected to be over size, with a hard, unyielding head. The tendency for the elderly primipara to go over time should be kept in mind. The pelvis is more often contracted, and the premature rupture of the bag of water is a definite hazard, as well as the increased rigidity, inelasticity, and underdevelopment of the maternal soft parts. Because of the poor maternal constitution, the birth pains are weak and labor is over long, likely ending in ill advised emergency operations. The tendency to abortion in the substandard woman should be mentioned.

The after effect of labor in the elderly primipara also depends on the constitution of the woman and the condition of her genital tract. Many of these women are permanently crippled physically and some of them are made invalids. A large percentage of them are not able to furnish sufficient milk for the baby. A long, tedious, painful labor may cause such a profound nervous upset that she can never become normal again. Those cases with extensive, deep lacerations have a lessened nervous innervation, and an altered vascular and muscular structure of the genital tract, resulting in incomplete satisfaction during the sexual act.

In regard to treatment, every case should be studied and measured individually. Those women of the first class who are of average, or above the average, in physical fitness can generally be delivered normally, with an occasional bad laceration through the perineum, vagina and sphincter ani. For the extremely hypo-plastic and asthenic type of women an elective Caesarean section at term is undoubtedly the only safe procedure, with probably sterilization. It might be better for such individuals and for society if these women were sterilized before they become pregnant. Do not attempt to bring on a premature delivery in such a case, because it probably won't work and the physician will find himself in a very embarrassing situation and his patient in a very critical one. The greatest anxiety is caused by those cases who are not frankly hypo-plastic and are not extremely asthenic. Such a case must be studied thoroughly and repeatedly. Consultation here is most essential, and a consultant should be chosen in whom both the physician and the patient's family have confidence. If a living child is especially desired, I would invariably advise section at term. Finally, I would emphasize that all these cases should be considered abnormal and so treated 'til they have been found to be otherwise.

BIBLIOGRAPHY

Caffrey, L. E. A Comparative Study of Pregnancy and Labor in Primiparae in Relation to Age. J. Michigan M. Soc., Grand Rapids, 1926, XXV, 649-651.

Harris, J. A. On Correlation Between Age of Parents and Length and Weight of the Newborn Infant. Proc. Soc. Exper. Biol. & Med., Utica, N. Y., 1926, XXIII, 801-805.

Jaroschka, Karl. Uher den Verlauf der Erstgeburt im hoheren Lehensalter. (Concerning the Course of the Delivery

in Elderly Primiparae.) Med. Klin., Berlin, 1926, XXII, 448-451.
Remnelts, R. Konstitution und erste Geburt im spateren Alyer. (Constitution and First Delivery in Advancing Age.) Zentralbl. f. Gynak., Leipz., 1926, 1, 613-615.
Schaanning, G. Alderens inflydelse paa fedselens forlpog prognose. (The influence of age upon the course and progrosis of delivery.) Norsk Mag. f. Laegevidensk. Norway, 1925, XXXVI, 1075-1123.
Baer, W. Types of constitution in women; their importance in obstetrics. Allg. deutsche Hebam.-Ztg., Berl., 1928, XLIII, 43-47.
Plauchu. Delivery in primipara of forty-eight and one half years; dystocia. Bull. Soc. d'obst. et de gynec., Par., 1928, XVII, 61.
Williams, P. F. Pregnancy and labor in very young and elderly primiparae. Atlantic M. J., Harrisburg, 1923, XXVI, 456-469.

THE RARITY OF BRAIN TUMORS IN INSANE, EPILEPTIC, AND FEEBLE-MINDED PATIENTS*

Newdigate M. Owensby, M.D.,
Atlanta, Georgia

The writer has made a sincere effort to ascertain in the incidence of brain tumors occurring in the insane, epileptic, and feeble minded, and disclaims any originality for this article. Moreover, he wishes to state that the material for this article has been gathered from the writings of Cushing, Bailey, Davidoff, Ferraro, Bramwell, and numerous recognized investigators of intracranial growths. At times they are quoted verbatim. A bibliography is appended from which this material has been gathered and it is hoped that it will suffice for the occasional neglect to mention the author, and the failure to always use quotation marks.

"The incidence of brain tumors among the psychotic (insane, epileptic and feeble-minded) patients is no greater than among patients in general hospitals. It amounts to anywhere from 0.21 per cent (Fischer) to 1.9 per cent (Knapp)."

Davidoff and Ferraro

According to the New York State Hospital Commission (State of New York, J. B. Lyon Company, Albany), which has charge of all state institutions for the insane, epileptic and feeble-minded patients during the years beginning July 1, 1921, to June 30, 1926, which represented the years of greatest activity so far studied, the greatest average of brain tumors occurring in their inmates was 0.066 per cent. During the year July 1, 1925 to June 30, 1926, the total census of patients, plus those discharged during the year was 52,256, and only 32 of those patients presented evidence of brain tumors.

Davidoff and Ferraro, of the New York Psychiatric Institute at Wards Island, New York, state that allowing for the number of tumor patients that undoubtedly go undiagnosed beyond the point of organic brain disease, the intracranial tumor patients among state hospital patients can hardly be estimated as greater than 0.1 per cent. Blackburn made 1,642 autopsies at the Government Hospital for the Insance (St. Elizabeths), at Washington, D. C., and found only 1.7 per cent intracranial tumors. Bramwell calls attention to the fact that the head is always opened at autopsies in mental hospitals, therefore, it is natural to surmise that growths or other abnormalities of the brain are seldom overlooked. Knapp in discussing the incident of brain tumors among mental patients, states that Fischer found only one tumor, or growth, in 318 autopsies a percentage of 0.21 whereas he, himself, found 1.9 per cent in 5,069 autopsies in a general hospital.

"Practically all patients with brain tumor, or other intracranial growths, show a certain degree of mental impairment in the form of apathy, defective attention and concentration, dullness of intellect, and slowness of response. In the later stages drowsiness, stupor and coma supervene." Therefore, they are usually brought to the attention of the psychiatrist for a diagnosis, hence the physician following this specialty should, and perhaps does, see more patients with intracranial growths than does any other specialty in medicine. "Moreover, the psychiatrist is best trained to study the mental symptoms presented." Bruns, Gordon, and a host of others, are of the opinion that since so few brain tumors occur among psychotic patients, that in itself is evidence that tumors are not among the important causes of specific types of psychoses. They believe that the tumors are often unassociated with the mental symptoms except in precipitating a potential psychosis in a sensitive person or a border line patient. Baruk very recently gave the results

*Read at the staff meeting of the McCall Hospital, Rome, Georgia, March 8, 1929.

of a thorough study of 55 personally observed patients who had intracranial growths, and concludes that the most important factor in the production of mental disturbances in patients with brain tumor is the accompanying intracranial pressure which in itself causes mental changes. However, some mental changes are undoubtedly due to the location of the growth.

In view of the hundred of thousands of psychotic patients who fail to show any evidence of brain tumor or intracranial pressure, the exceedingly rare case where it does occur cannot be regarded with any more significance than does the occasional headache. Millions of headaches are due to eye strain, dietary indiscretions, etc., where one is due to a brain tumor.

Schuster made a very extensive study of the literature for brain tumor cases wherein mental symptoms predominated, and succeeded in finding 423 such cases; 95 of these presented states resembling epilepsy, maniacal, and similar conditions, 57 were melancholic or depressed, 15 resembled neurasthenia or hysteria, etc. An infinitesmal number when compared to the enormous number of the same conditions due to other causes. It is, of course, impossible to estimate the number of psychotic patients existing at the time he made this study, but according to the most reliable figures obtainable, they represented from 0.06 to 1.9 per cent of the psychotic patients. "It is nevertheless striking, as one peruses these summaries, to find that frequently the apparent psychosis is simply a manifestation of even a simple loss of control of the vegetative functions which the family physician, and particularly the patient's family, interprets as an intracranial growth." There are in excess of 500,000 insane patients in the United States today and, if we judge the number of those suffering with brain tumor, according to statistics furnished by the New York State Hospital Commission, we will find only 0.066 per cent so afflicted. Therefore it would seem that it behooves one to be extremely cautious before making a diagnosis of brain tumor because of any one, or group of symptoms, since they are all more or less common symptoms of other diseased conditions. Certainly a very careful psychiatrical examination should be made before a positive diagnosis of intracranial growth is made.

Again, it is well to examine into the percentage of brain tumors which are of a malignant nature and from which no hopes can be entertained for a complete recovery. Up to October 1, 1925, Doctor Harvey Cushing service at the Peter Bent Brigham Hospital in Boston, showed 42.4 per cent of his tumor cases to belong to the Glioma group. Pituitary tumors, meningiomas, congenital tumors, etc., made up the remainder. An unusually large percentage belonged to the pituitary group, which is not true of those found by Tooth and other well known operators and clinics. The reason for this discrepancy was doubtless due to the fact that special interest has been taken in this particular growth and the conditions associated with them at the Boston clinic. As a result of this interest taken in pituitary tumors by Cushing and his associates, some interesting observations have been made which are not as yet known to the general physician. However, that does not belong to the province of this paper since its function is to discuss the incidence of intracranial growths. Dr. Cushing's collection up to January 1, 1927, showed that he had divided his gliomas into subgroups. Of this group the spongioblastoma, astrocytoma, and the medulla blastoma, predominated. The spongioblastomas were rapidly fatal owing to their rapidly fulminating growth and Bailey and Cushing found that the average survival period from the beginning of their 117 patients afflicted with this tumor, was only 12 months. All but five were operated. Even tumors as malignant as these, when growing in silent areas of the brain, may not arouse any suspicion until they are beyond any possibility of surviving an operation. However early operated, only a few weeks or a few months may be added to the patient's existence. Since their existence is purely a vegetative one in the vast majority of cases, it is doubtful if that existence is always desirable. Elsberg and other equally as well known investigators as Cushing, have placed the incident of

gliomas from 60 per cent to 70 per cent of all brain tumors.

In the Southeastern Institutions for the Insane Epileptic and Feeble Minded, the percentage of intracranial tumors are about the same as shown by the State Hospital Commission of New York, and range from 0.04 to 0.06 per cent. Extracts from personal communications dated during the month of March, 1929, follow:

Doctor W. S. Farmer, Superintendent of the Central State Hospital, at Nashville, Tenn., stated that he had found two brain tumors among the inmates of his institution during the past 12 years. Dr. R. E. L. Smith, Superintendent of the Eastern State Hospital at Bearden, Tenn., writes that only two cases were found in the inmates of his institution during the past ten years and both were verified. The average population of this institution is 1,300 patients. At the Georgia State Sanitarium, with an average yearly admission of 1,200 new patients, there has only been two brain tumors in the past several years. The average daily population of the Georgia institution is nearly five thousand patients, some of whom are insane epileptics. It may be mentioned in passing that the ketogenic diet treatment was used on a group of epileptic patients at Milledgeville for a period of two years without any material benefit being observed. The Alabama Insane Hospitals show that in 1927 there were 1,188 admissions with only one case showing symptoms of brain tumor. In 1928, there were 1,848 admission, two of which presented evidence of brain tumor. The report received from the Mississippi State Hospital at Jackson, Miss., failed to reveal any admissions of patients afflicted with brain tumors during the years 1926-1927. The North Carolina State Asylum has only one epileptic who presents symptoms of intracranial growth and he was operated for brain tumor prior to his admission.

An examination of the annual reports of any state institution within the borders of the United States or Europe will reveal a similar small percentage of intracranial growths among their psychotic patients.

The medical officers of these institutions are splendidly trained physicians and psychiatrists, and are equipped with a better knowledge of the anatomy, physiology, pathology, and functioning of the brain and mind than are any other class of physicians, therefore, their qualifications for diagnosing intracranial growths, injuries and diseases of the brain cannot be disputed. Because they necessarily have to deal with much psychological material, their other qualifications are often overlooked by the unthinking person. Then too, their familiarity with the extremely delicate structure of the brain and the ease with which this organ can be damaged beyond repair, makes them like the angel who feared to tread where the untrained often rush in.

A personal communication from Doctor William T. Shanahan, Superintendent of the Craig Colony for Epileptics (the largest colony devoted exclusively to epileptics in the United States) at Sonyea, New York, is of interest and herewith extracted. "During the fiscal year ending June 30th, 1927, one brain tumor case came to autopsy. Male, 26 years of age, alleged onset at three years, blind from birth, imbecile. Two brothers and four sisters said to be mentally defective, maternal grandmother suicide, mother hysterical and sexually immoral. About six years before this patient's death his weight increased markedly within a short period, suggesting pituitary disturbance. At autopsy, a pituitary brain tumor case. During the fiscal year ending June 30, 1928, a female case came to autopsy, in whom a brain tumor was found. This was a girl 13 years of age, who had been a patient at the Colony for two years, two maternal aunts epileptic. Alleged onset of epilepsy six years, assigned cause, worms. When admitted to Colony no paralysis, no evidence of neurological disorder. Graded as a moron. Died unexpectedly April 18, 1928. At autopsy, tumor mass about the size of a walnut was found in the right hemisphere at tip of the post cornu of the lateral ventricle. This tumor mass had undergone secondary degenerative changes, other than this, the brain showed no gross pathology. At the present time there is a patient living at the Colony in whom a diagnosis has been made of a pitu-

itary tumor. This patient, a male aged 32 years, moron, was admitted to the Colony July 23, 1927. History of convulsions first occurring at 27 years of age. Patient one of triplets. The possibility of a pituitary tumor because of patient's obesity, impairment of vision, attacks of mental dullness was recognized before patient entered Colony. In the brain tumor mentioned in the second case coming to autopsy, there is a question of course as to what bearing this had regarding the occurrence of seizures. From time to time brain tumor is found in an epileptic in whom the tumor no doubt developed subsequent to the epilepsy rather than antedating it. Again, the two conditions may be coincidental and the brain tumor not necessarily producing the epilepsy. Our average population for the past two years has been 1,510 patients." Therefore, we see that epilepsy is not always to be regarded as a symptom of brain tumor since it frequently antedates the brain tumor as is shown by the above cases.

Again, choked disk cannot be regarded as proof positive of brain tumor. Van Wagenen, in a review of the literature on brain tumor without choked disk, calls attention to the fact that it is becoming more and more common to regard this as a later symptom of intracranial growths. He considers that choking is mainly mechanical in character and depends primarily on interference with cerebrospinal circulation, while the actual size of the tumor is a secondary factor and hyperplasia of brain tissue in connection with brain tumor plays a minor role. In a series of cases he found 30 per cent of brain tumors, both verified and unverified, without choked disks. The errors in diagnoses of brain tumors may be gathered from statistics quoted by Van Wagenen. He stated that 461 cases were admitted for brain tumor to the neuro-surgical service of the Peter Bent Brigham Hospital, Boston, during the year 1924-1925, of these he found 365 (79.1 per cent) were considered certain or probable; 145 were histologically verified at operation or autopsy, 9 per cent had been verified at previous admissions; 22.2 per cent were unverified, and 29 per cent were regarded as tumor suspects. Over 51 per cent unproved.

Formerly the diagnosis of intracranial growths was made at autopsy and therefore very little, if any interest was manifested in them except by the Neuropsychiatrist or pathologist. During the past twenty-five years diagnostic methods have been improved to such an extent that now the diagnosis can be made on the living patient, and frequently the exact or approximate location of the growth can be determined. Because of the improved technique, and the spectacular nature of the diagnosis, the pendulum is beginning to swing from a complete lack of interest to perhaps a too great an interest, and the resultant damage may be worse than that due to the former indifference. Before the advent of modern methods of diagnosing brain tumors on a living patient, a very thorough examination was made by a physician who had received special training in nervous and mental diseases, whereas now attempts at diagnosis are made by men who have not received this training. A retrospective view by any physician of his own training in nervous and mental diseases will convince him of the fact that it was inadequate and that his Alma Mater neglected these branches of medicine.

One of the most brilliant of all English neurologists, Sir James Purvis-Stewart, has recently published a book on "Intracranial Tumors and Some Errors In Their Diagnosis" and he very candidly admits his many mistakes. Had he been a psychiatrist as well, perhaps some of his mistakes could have been avoided. The psychiatrist's point of view regarding the indiscriminate diagnosis of brain tumors by untrained men can be summed up by the following extract from a communication from a superintendent of one of the larger of our Southern Insane Hospitals: "We rarely receive a brain tumor case in this institution because most of them are operated and go to their death before reaching us. However, we do receive many patients whose psychoses is due to an operation from an intracranial growth which did not exist."

In conclusion it might be well to reiterate the extreme rarity of intracranial growths and

to call attention to a statement by Doctor Charles L. Dana (professor of nervous diseases in Cornell University Medical College), in his text book of nervous diseases, that "the removable tumors of the brain amount to less than five per cent." If the percentage of the incident of intracranial growths in insane, epileptic, and feeble-minded patients is from 0.066 per cent to 1.9 per cent and only 5 per cent of those are removable, is one ever justified in operating on these cases? In view of the fact that the insanity, epilepsy or feeble-mindedness sometimes antedates the intracranial growth, certainly no one can entertain hope of ever restoring the patient to a normal mentality by removing the growth. Moreover operations on the brain or its meninges for the removal of adhesions, etc., in order to cure insanity, epilepsy, feeble-mindedness or paralyses, should be refused rather than discouraged.

BIBLIOGRAPHY

Davidoff, L. M., and Ferraro, A. Intracranial tumors among mental patients. American Jour. of Psychiatry, 1929. VIII, page 599.

Davidoff, L. M.—Staining fibrillary neuroglia in formalin-fixed material. American Jour. Path. 1928. IV, 493.

Cushing, H. and Davidoff, L. M. Studies in acromegaly; basal metabolism. Archiv. Int. Med. 39. 673. May, 1927.

Bailey, P. and Cushing, H. Tumors of the Glioma series. Phila. 1926. J. B. Lippincott & Co.

Noble, R. A. Treatment of Feeblemindedness in Great Britain and America. Med. Jour. Australia, July 12, 1924.

Sheehan, R. F. Military Mental Defect. Military Surgeon, Oct. 1928, Vol. 56.

Collier, G. K. Chairman's Address: Section on Convulsive Disorders. Amer. Jour. of Psychiatry. 1928. VIII, page 269.

Muskens, L. J. J. Epilepsy. Comparative Pathogenesis, Symptoms, Treatment. N. Y. William Wood & Co., 1928.

Blackburn, I. W. Intracranial tumors among the Insane. Washington, 1903. Gov't Print. Office.

Bramwell, E. Tumors of the Brain. Oxford Medicine, New York, 1921. Vol. VI, page 137.

Bruns, L. Die Geschwulste des Nervansystems. Berlin, 1908. S. Karger, 2nd. edition.

Baruk, H. Les troubles mentaux dans les tumeurs cerebrales. Etude clinique, Ratipgemoe, traitement. Paris, 1926, G. Doin et Cie, 8.

Dana, Charles L. Text Book of Nervous Diseases. New York, 1925. William Wood & Co. page 495.

Gordon, Alfred, Cerebral tumors and Psychoses. Med Jour. and Rec. 1926, CXXIV, 555.

Greenfield, J. G. The Pathological examination of forty intracranial neoplasms. Brain, 1919, XLII, 29.

Knapp, P. C. The Mental symptoms of cerebral tumor. Brain, 1906. XXIX, 35.

Schuster, P. Psychische Storungen bei Hirntumoran, 1902, Stuttgart, F. Enke., page 368.

Spiller, W. G. Gliomatosis of the pia and metastasis of glioma. Journal Nerv. and Ment. Dis. 1907, XXXIV, 297.

Strauss, I., and Globus, J. H. Spongioblastoma with unusually rapid growth following decompression. Neurol. Bull., 1918, I, 273.

Tooth, H. Some observations on the growth and survival period of Intracranial tumors, etc. Brain, 1912, XXXV, 61.

Ribbert, H. Ueber das Spongioblastom und das Gliom. Virch. Archiv. 1918, CCXXV, 195.

Van Wagenen, W. P. The incidence of Intracranial Tumors without "choked disk," in one year's series of cases. Amer. Jour. of Med. Sciences, 1928, Vol. CLXXVI, 346.

Bailey, P. Histologic atlas of Gliomas. Arch. path. and Lab. Med. 1927, IV, 871.

Bailey, P. Further remarks concerning tumors of the Glioma group. Bull. J. H. Hosp., 1927, XI, 354.

Berblinger, W. Zur Kenntnis der Zirbelgeschwulste. Ztsch. f. d. gas. Neur, u. Psych. 1925, XCV, 741.

Elsberg, Charles A. Quoted from Text Book on Nervous Diseases by Dana. Page 476.

Fischer, Quoted from "Intracranial tumors among mental patients," by Davidoff and Ferraro.

(Balance of reference omitted for lack of space.)

DILUTION AND CONCENTRATION TESTS OF KIDNEY FUNCTION

Allen H. Bunce, M.D.,
Atlanta

When the history and clinical examination of a patient suggests impairment of kidney function we resort to certain laboratory procedures to confirm or disprove our clinical impressions and if impairment be present to determine its extent. Much valuable information is obtained by a comparison of the volume of urine voided during the day with that voided at night, urinalysis, the 'phthalein dye test and the blood chemistry. With most of the other tests there are certain technical difficulties hard to overcome in the routine practice of medicine.

It is often stated "when the volume of urine voided during the day exceeds that voided during the night the patient already has a decreased kidney function." I believe this to be true although the primary condition may be an abnormality of the circulatory system rather than a primary disease of the kidneys. As a routine procedure we examine a night and morning specimen of urine of all patients studied. This gives much more information from both a chemical and microscopical standpoint than the examination of a single specimen and at the same time permits a comparison of th especific gravity.

The phenolsulphonethalein functional renal test is the best of the dye tests for routine use. It is especially valuable in the comparison of the function of the two kidneys when unilateral disease is suspected. The value of the 'phthalein test is enhanced by giving it intravenously and reading the half hour specimens separately since in early impairment the peak of the output curve is delayed whereas in the normal individual the maximum output occurs during the first half hour. Notwithstanding certain advantages of this test it gives little information in early disease of the kidney. In fact, it may even show an increased output after damage to the secreting epithelium has already taken place.

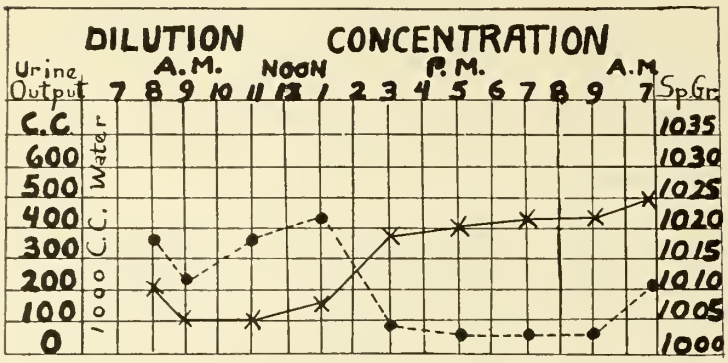


ILLUSTRATION No. 1

Normal Kidney Function

Case 1. M. L., a white female, aged 32, suffering from a focal infection and a mild psychoneurosis, was admitted to the hospital for removal of an apical abscess. Blood pressure, 115-90. The urine was normal on repeated examinations. 'Phthalein output 85 per cent. Blood chemistry: sugar 100; urea nitrogen 12; creatinin 1.2; chlorides 450 milligrams per 100 cc. Dilution and concentration tests: urine output for the first four hours 975 cc. It increased to 1405 cc. in six hours. The specific gravity fell from 1010 to 1005 in four hours and rose to 1023 the next morning.

Dotted line indicates volume of urine output and solid line specific gravity.

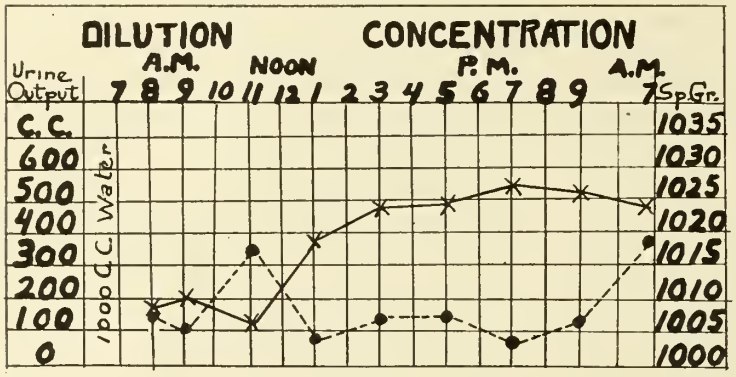


ILLUSTRATION No. 2

Generalized Arteriosclerosis

Case 2. W. H., a white male, aged 54, suffering from generalized arteriosclerosis was admitted to the hospital following a cerebral angiospasm which had been preceded by overindulgence in eating and drinking. Blood pressure 160-100. Ophthalmoscopic examination showed schlerosis of the retinal vessels. Repeated urinalyses showed faint traces of albumen and a few hyaline casts. 'Phthalein output, 60 per cent. Blood chemistry: sugar 125; urea nitrogen 30; creatinin 1.5; chlorides 400 milligrams per 100 cc. Dilution and concentration tests: urine output first four hours 600 cc. increased to only 675 cc. in six hours. The specific gravity fell from 1008 to 1007 in four hours but rose to 1026 at the end of twelve hours.

Dotted line indicates volume of urine output and solid line specific gravity.

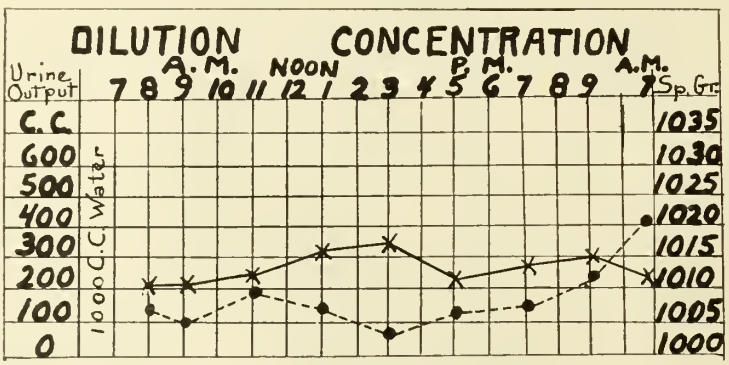


ILLUSTRATION No. III

Pernicious Anemia

Case 3. S. G., a white male, aged 58, suffering from a generalized passive congestion during the course of chronic pernicious anemia. At the time of the test the hemoglobin was 40 per cent, the red cells 1,300,000 and the white cells 2,500. (He had had the disease for four years during which time he had been admitted to the hospital twenty-five times for thirty-three transfusions. He was subsequently placed on the liver diet of Minot and Murphy and made a spectacular clinical recovery. He is at the present time clinically well.) Blood pressure, 90-50. Urinalyses showed albumen and both hyaline and granular casts. 'Phthalein output 48 per cent. Blood chemistry: sugar 110; urea nitrogen 20; creatinin 1.9; chlorides 640 milligrams per 100 cc. Dilution and concentration tests: urine output first hour 440 cc. increased to 590 cc. in six hours. The specific gravity remained fixed at 1010 during the first four hours and rose to its highest point, 1016, at the end of eight hours.

Dotted line indicates volume of urine output and solid line specific gravity.

The blood chemistry gives valuable information as to the nitrogenous retention products. The earliest change is an increase of the uric acid but since this may be caused by conditions other than kidney disease the diagnostic value of its determination is de-

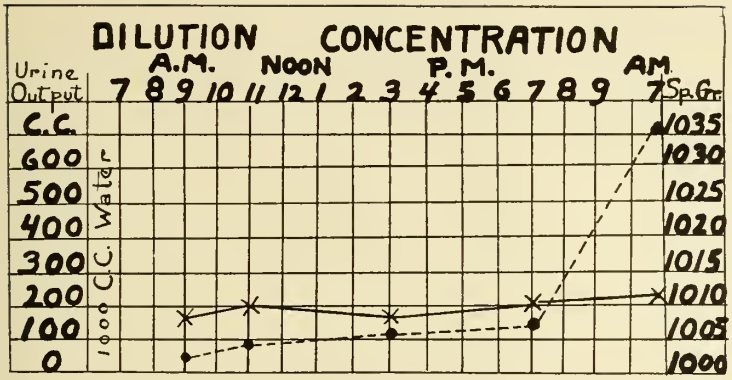


Illustration No. 4

Chronic Bright's Disease

Case 4. G. M., a white male, aged 47, suffering from chronic Bright's disease was admitted to the hospital on account of marked dyspnoea and failing vision. Blood pressure 220-120. Ophthalmoscopic examination showed advanced "albuminuric" retinitis. Urinalyses showed albumen and many granular casts in all specimens. Blood chemistry: sugar 240; urea nitrogen 90; creatinin 5; chlorides 540 milligrams per 100 cc. 'Phthalein output 18 per cent. Dilution and concentration tests: urine output first four hours 125 cc. increased to 250 cc. in eight hours. The specific gravity varied only from 1008 to 1011 during the entire time of the test. He died three weeks later from uremia. Autopsy revealed advanced chronic interstitial nephritis.

Dotted line indicates volume of urine output and solid line specific gravity.

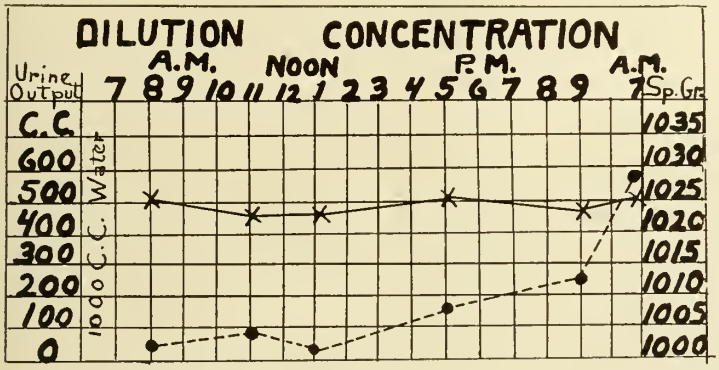


Illustration No. 5

Chronic Passive Congestion

Case 5. L. H., a white male, aged 52, was admitted to the hospital suffering from chronic passive congestion due to cardiac decompensation. Blood pressure 150-100. Urinalyses showed large amounts of albumen and a few hyaline and granular casts. 'Phthalein output 24 per cent. Blood chemistry: sugar, 130; urea nitrogen 35; creatinin 1.7; chlorides 700 milligrams per 100 cc. Urine output first four hours was only 185 cc. at the end of six hours and increased to 1090 cc. at the end of twenty-four hours. The specific gravity varied only from 1025 to 1023, showing fixation at a high level.

Dotted line indicates volume of urine output and solid line specific gravity.

creased. The urea nitrogen is dependent upon both endogenous and exogenous nitrogen and hence varies considerably with the diet. However, more than 40 grams per 100 c.c. is usually indicative of nitrogenous retention. The creatinin being endogenous in origin is not influenced by the diet, but since it does not increase until late in kidney disease it is relatively unimportant from a diagnostic standpoint. Still it is especially valuable in prognosis in late and serious disease of the kidneys. Anything above 2 milligrams per 100 c.c. may be considered abnormal. A determination of the blood sugar should be done in all of these cases since it helps materially in the treatment. A high renal threshold for sugar is not an infrequent finding in all forms of renal disease. When there is retention of fluids a determination of chlorides is helpful. Still blood chemistry does not help us a great deal in early impairment of kidney function because these changes take place relatively late.

The earliest sign of renal impairment is shown by the kidney's inability to dilute and concentrate the urine. The dilution and concentration tests were devised to determine this function of the kidney. These tests show definite deviation from the normal very early after impairment begins and are positive before sufficient change has taken place in the renal epithelium to interfere with the secretion of the dyes or for retention to take place as shown by changes in the blood chemistry. Pratt* gave an excellent summary of the advantages and limitations of the dilution and

*Pratt, Joseph H.: The dilution and concentration tests of renal function. Boston M. and S. J., 1926, **195**, 5, pp. 203-207 (July).

CHART I
DIRECTIONS FOR DILUTION AND CONCENTRATION TESTS

7:00 A. M.	Empty bladder by voiding.
7:00 A. M.	Drink, within ten minutes interval, 1,000 cc. water.
8:00 A. M.	Collect specimen.
8:00 A. M.	Breakfast.
9:00 A. M.	Collect specimen.
11:00 A. M.	Collect specimen.
12:00 Noon	Lunch.
1:00 P. M.	Collect specimen.
3:00 P. M.	Collect specimen.
5:00 P. M.	Collect specimen.
6:00 P. M.	Supper.
7:00 P. M.	Collect specimen.
7:00 P. M. to 7:00 A.M.	Collect as one specimen.

NOTE: All meals should consist of relatively dry food which the patient may select according to his taste. No fluid should be given until 7:00 P. M., unless thirst is especially annoying, when a measured quantity may be taken at 5:00 P. M. The two-hour specimens must include the total urine voided during this period.

LABORATORY PROCEDURE:

Record:

(1) Quantity and specific gravity of each fractional specimen.

(2) Complete urinalysis of specimen voided at 7:00 A. M. (before the test), and of twelve-hour (7 P. M. to 7 A. M.) specimen.

concentration tests as diagnostic measures.

In order to simplify the carrying out of the procedure properly we prepared and had multigraphed the instructions tabulated in Chart I. One of these instruction blanks is attached to each patient's chart in the hospital or home and both the nurse and the patient are instructed to observe all details, this saves time and insures the correct procedure. All patients are instructed to remain in bed during the test.

The patient with normal kidney function should excrete the entire thousand c.c. of water as urine within the first four or five hours. The specific gravity should drop promptly to 1.005 or lower. Conversely, during the afternoon and night the quantity of urine should be greatly diminished and the specific gravity should rise to 1.025 or above.

A brief resume of five illustrative cases accompanies this report. The blood for chemical examination in these cases was obtained in the morning before the patient's breakfast. No special preliminary preparations were made. During the day of the test the patients were allowed a general diet except that watery vegetables and fruits, soups and all other liquids were omitted. One cubic centimeter of phenolsulphonephthalein (H. W. & D.) was given intravenously and the urine collected at one-half and one hour intervals.

In the reports the total output for one hour is given. These tests were made on separate days from those on which the dilution and concentration tests were made. They were preceded by the usual intake of water.

Summary and Conclusions

1. Five illustrative cases are reported showing the behavior of the dilution and concentration tests in patients with impaired kidney function and those with normal kidneys.

2. The dilution and concentration tests of kidney function give earlier information in reference to the functional capacity of the kidneys than any other functional renal test.

3. The dilution and concentration tests of kidney function require no special apparatus and no special technical knowledge for their interpretation. They can be used successfully by any physician in the patient's home or hospital.

PULMONARY TUBERCULOSIS*

Early Diagnosis and Treatment

CHAMPNEYS H. HOLMES, M.D.
Atlanta

The recorded literature on tuberculosis is amazingly vast; in fact exceeding that on any other subject in the whole field of medicine. It is evident, therefore, that this fact entails a marked limitation and restriction, both in scope and character, upon this presentation. You have, of course, access to this extensive and exhaustive accumulation of literature; so I feel it to be more to our purpose to attempt a brief survey or outline of this phase of the subject, emphasizing the cardinal features and making some mention of recent trends or developments—the whole being to some extent colored by my own experiences, observations and conclusions in this field of work.

*Read before the Cobb County Medical Society, November 9, 1928.

Diagnosis

Our equipment for diagnosis consists in the history, physical examination, roentgenology, laboratory examinations and certain special tests.

History: The history, and I mean one that is thorough and accurate as to inquiry and detail, is of tremendous value. Not uncommonly it in itself is almost sufficient to make the diagnosis, and at times, even where the remaining methods of investigation reveal little. The history gives a story of the patient's symptoms, their character, order of appearance and mode of development. It furnishes a background and setting to the individual under investigation—unfolding the various influences, beneficent and maleficent, in his life. Lastly, but of tremendous importance, you learn from the family history the vital information as to the intimate and early life exposure.

There are three important things that the symptoms do. First, direct the individual to seek medical advice; second, cast suspicion as to the tuberculous nature of the condition; and third—although of extreme importance it does not concern us in our present consideration, and is that of giving, as nothing else does, information as to activity or inactivity of a known tuberculous lesion. Unless the suspicion of tuberculosis is in the mind of the examining physician, many a case of early tuberculosis will go undiagnosed. Dr. Pottenger is responsible for the dictum "the first and most important point in the diagnosis of phthisis is to know when to suspect it." The prominent symptoms of tuberculosis may be listed as follows: cough, fever, hoarseness, loss of weight, loss of strength, cold sweats, rapid pulse, palpitation, nervousness, insomnia and dyspepsia. There are many others of lesser importance. Of the symptoms the most important is cough; but it must not be forgotten that well established disease may be present without it. While the cough does not conform to any special type, the most characteristic is the well known slight hacking cough. Any cough persisting over three months should provoke the suspicion of tuberculosis. The characteristic temperature curve in early tuberculosis is one showing a sub-normal temperature in the morning and a slight rise above normal in the afternoon and early evening. A two to four hourly temperature chart for a week should be kept on the patient under study for incipient disease, making sure that no temperature is taken within an hour after any form of exercise. Time does not permit a further detailed discussion of these or the other symptoms.

The modes of onset are many and varied. A common one is the catarrhal, in which the patient gives a history of frequent colds and attacks of influenza. He seems not to make a complete recovery from the last attack and seeks medical attention because of persisting cough, fever, hoarseness and weakness. The onset may be insidious, the individual feeling "run down" and fatigued and seeks relief first in the various tonics. A neurasthenic picture of depression, insomnia, dyspepsia, irritability and fatigue may usher in the disease. An influenzoid symptomatology-cough, fever, chilly sensations, pains, and aches, particularly in the region of the shoulder and sweats may characterize the onset. Asthmatic or bronchitic seizures not infrequently initiate the development of tuberculosis. Such an onset is especially characteristic of hilus tuberculosis. Two most important modes of onset are the pleuritic and hemoptysic. It very frequently happens that the long interval following an attack of pleurisy or hemoptysis and in which there is for months or years a complete freedom from symptoms, causes the significance of this onset to be overlooked or forgotten. I can pause only long enough to offer this caution—in every case of pleurisy or hemoptysis, consider it tuberculosis until proved otherwise.

Physical: I shall not burden you with the details of the physical examination, as these can be found in most any text book on medicine or physical diagnosis. There are however a few special points or suggestions to which I should like to call attention. In the first place, it is very important, where conveniently possible, to make a general examination rather than one limited to the chest. The finding, for instance, of a draining sinus, an anal fistula, a tuberculous joint, a cold

abscess, etc., will lend support to the tuberculous nature of a lesion in the lungs. While as a usual thing the tuberculous individual shows a state of poor development, under-nutrition and hypo-tonia; do not be misled if these be not present. It often happens that an individual with well advanced disease may outwardly be the picture of robust health or be inclined to obesity. A little point I have found of appreciable value is the inspection of the nails, which very often in tuberculosis show a forward and lateralward curvature, in marked cases resembling a bird's beak. Advanced degrees of this same phenomonon producing clubbed or drum stick fingers—a condition called by the technical term of chronic pulmonary osteo-arthropathy—usually speaks against tuberculosis. It is as a rule seen in congenital heart disease and suppurative pulmonary conditions such as bronchiectasis, abscess and gangrene.

The main interest, of course, in the examination, centers in the examination of the chest. The usual methods of inspection, palpation, percussion and auscultation, the details of which I shall not go into are accurately and thoroughly applied. I should like to emphasize the value of a careful inspection of the chest, which I have frequently observed, in physicians as well as medical students, in their eagerness to begin percussion and auscultaion, to be notoriously neglected. The general configuration of the thoracic cage should be noted and when the so-called 'habitus phthisicus" or "paralytic thorax" is seen, it forms a very striking picture. It comprises the following characteristics: long, narrow, flat thorax with acute epigastric angle, sloping shoulders and winged scapulæ. While this picture is very commonly associated with tuberculosis, it is not necessarily so, and tuberculosis may be present where the thorax presents a picture of emphysema. A careful search should be made for a slight flattening of one apex, an exaggeration of the supra and infra clavicular fossa, some atrophy of the underlying muscles and a slight inequality of expansion or a slight lag of one, or part of one side. A sign that is not well known, but is occasionally found and of some value in the early stage of the disease, is a sense of resistance in palpating the ridge of the trapezius muscle overlying the affected apex. It requires a very delicate, sensitive palpation to obtain it. Another bit of valuable information may be obtained, in some cases, by the careful palpation of the trachea for a slight deviation toward the affected side. This is done with the ends of the thumbs in the supra-sternal notch.

The measurement of that area of resonance which overlies the shoulder in something of a saddle fashion and known as Kronigs isthmus, may be a determination of considerable value; but unfortunately is often omitted in the usual chest examination. The average measurement in health is about 5 cms. and anything below 3 cms. is considered definitely pathologic. Dr. Clive Riviere, of England, in his book on "The Early Diagnosis of Tubercle," places considerable stress upon the value of this sign. This same author describes two bands of impairment, one running across the apices and the other across the lower scapular region which he calls reflex bands and thinks their presence is of considerable diagnostic importance. Comparing on the two sides, the vertical excursion of the lungs into the complimental pleural spaces, is a determination of importance in early apical disease and in the presence of pleuritic adhesions. This is performed by percussing during the phases of inspiration and expiration and is known as tidal percussion. Now a word about the art of percussing. The trend of phthisiologists is towards the use of very light percussion. I employ it in my own work and find it decidedly preferable. In addition, I find that the sense of resistance imparted to the pleximeter finger by the underlying tissues of considerable aid. Probably the most important phase of the physical examination is auscultation, and the most definite and significant finding by this method being persistant crepitations (rales) in the upper lobes. The apex is the usual site for the first demonstrable signs; but bear in mind they may make their first appearance anywhere, even at the base. Not infrequently, the first rales may be heard

just below the clavicle. Tempting though it is, to consider the various auscultatory phenomona of tuberculosis, time precludes this and I shall leave the subject after laying stress once more upon the tremendous importance of the expiratory cough. At the end of a full expiration, the subject gives a slight cough, and in the latter part of a short, quick inspiration following it, and at times during the cough itself, the rales in early tuberculosis are best brought out. In fact, in the vast majority of instances, they can be heard only in this way.

Roentgenology: Also here in tuberculosis, as so often in many other conditions, roentgenology is of the utmost importance—at times indispensable. No case can be said to have been completely studied where stereo films of the chest have not been made. The slight mottling or the fluffy appearance of a parenchymatous lesion is familiar to you all. More difficult of interpretation are the beaded streaks of a peri-bronchial infiltration running from the root of the lung upward and outward to the periphery—at times producing a fan-like arrangement known as Dunhams veil. The x-rays are by far the most valuable method of diagnosing hilus tuberculosis, in which condition signs are severely lacking or absent. As a rule the x-ray film reveals more pathology than the physical examination would indicate; but be not unmindful of the fact that an early apical catarrh may give rise to stethoscopic findings before producing a shadow on the films. Fluoroscopic examination, while of less import than the fixed films, gives valuable information on two points—the diaphragmatic movements and the inspiratory apical brightening. The failure of the apices to brighten during deep inspiration or during a cough is an early positive sign.

Laboratory: By far, the outstanding help from the laboratory in the diagnosis of pulmonary tuberculosis is the examination of the sputum; and the finding of tubercle bacilli in the sputum is proof positive of the existence of the disease. A negative sputum, however, does not rule out the diagnosis, except in those cases with extensive pathology and abundant sputum. Such a state, however, does not concern us in the consideration of the early diagnosis. The determination of the albumin content and the presence of alveolar cells in the sputum is a more recent development in the laboratory; but has not as yet received widespread application. They are not specific for tuberculosis but are found in pneumonia, pulmonary congestion and edema. The chief value of their determination seems to lie in giving support to the diagnosis of an early questionable lesion, the activity of a chronic one, and in the differential diagnosis from a bronchitis.

Special Tests: Among the special tests may be listed the tuberculin test, the compliment fixation test (the Wasserman of tuberculosis) the auto inoculation test the red cell sedimentation test and others of lesser importance. Most of these have as their object that vague and confused determination of activity or inactivity. They do not, as the Wasserman test, give the answer yes or not; but rather that of more or less. The most important of these special tests is the tuberculin test. The tuberculin test is divided into two phases—one for the establishment of tuberculous infection, the other for tuberculous disease. An example of the former is the Von Pirquet cutaneous test, of the latter, the subcutaneous tuberculin test. The Von Pirquet has little or no value in adults, but is of extreme value in infants and very young children where tuberculous disease and infection are almost synonymous. More and more importance is being given to the subcutaneous tuberculin test and when correctly done, is a most valuable method in the early diagnosis. The physician should be familiar with every detail of the test before attempting it; and the contra-indications to the test, a few of which are fever; obvious phthisis and recent hemoptysis, should be kept in mind.

Treatment

The treatment of tuberculosis consists in a systematized, orderly, regular regime built upon the foundation of rest. This rest should be complete, mental and emotional as well as physical. For a most thorough and delightful discussion of the rationale of this principle in the treatment of tuberculosis, I can recommend to you nothing finer than the

article of Dr. Kause entitled "Rest Among Other Things." The Sanatorium, with its splendid organization and equipment, its staff of trained workers in this field, and its location, as a rule favorable as to climate, serves as the ideal place for treatment to be carried out. The sanatorium serves further to remove the patient from his environment where he is beset and burdened with the many cares and details of his household and places him in an atmosphere which is peculiarly stimulating to his morale. Certain individuals, for one reason or another, have to take the "home cure" treatment, and when properly carried out, the results may be highly satisfactory. I have quite a little colony of such cases under my care at the present. It must not be forgotten too that the proper treatment and supervision of cases after their return from the sanatorium is a most important phase in this work. The details of the rest regime cannot be given here; but it is a matter of months to years, and requires the earnest co-operation, perseverance, optimism and sympathetic understanding of physician and patient. The whole personal life of the patient is supervised by the physician, and his hours of rest, play and exercise are doled out to him as one doles out the doses of digitalis. One good rule to remember is that any patient with persistent fever, however slight, should be kept at rest in bed. In beginning the treatment, I usually insist on from 2 to 3 months of initial bed rest. Supplements to the rest are good wholesome food and plenty of fresh air. Do not overstuff the patient and avoid the obsolete practice of excessive milk and eggs. These are excellent foods of course; but should be supplied in moderation along with a wholesome dietary and not to the exclusion of it.

Drugs play a minor role in the treatment of tuberculosis. Cough mixtures are as a rule pernicious, and one is seldom required in early disease. By far, the best cough remedy is rest in bed. Laxatives may be required, particularly during the bed rest period and one of the mineral oil preparations or a little cascara suffices for this purpose. Tonics and

(Continued on Page 186)

HAMMERS AND MONKEY WRENCHES

JANE VAN DE VREDE, R.N.,
Atlanta

Georgia nurses have been enthusiastic over the results of the nursing law passed by the General Assembly in 1927, and most cooperative in helping to carry out this law. This is manifested by the fact that during the year and a half registration has been mandatory, half as many nurses have been registered as during the entire twenty years previous.

Perhaps under the twenty year period of permissive legislation nurses had not realized or fully appreciated the value of registration; be that as it may, the new law has been the means of improving the individual professional status of hundreds of nurses in this state, especially those in smaller towns and rural districts. By becoming registered they have been made eligible to membership in professional organizations, and to apply for scholarships and loans to take post graduate courses for special preparation; to accept institutional service in other states; to serve with the various governmental organizations, the Veterans' Bureau, the U. S. Public Health Service, the Army, Navy and the American Red Cross, and incidentally their economic status has been improved.

It is, therefore, with surprise that the nurses learn of steps being taken by certain physicians to amend the law at the next session of the Georgia Assembly, the more so since it was largely due to the cooperation and support of physicians that the legislation was secured.

Difficulties with regard to standards in training schools are being charged to the new legislation, but are inevitable in Georgia as in all other states as a result of the activities of the American Medical Association through its Committee on Nursing, and following it to the National Committee on the Grading of Nursing Schools. The problems involved in the education of the nurse in connection with the economic care of the sick must be dealt with. To do so by attempting to overthrow the present nursing legis-

lation in Georgia is shortsighted, and will eventually be futile.

The Board of Examiners of Nurses is attempting to meet these difficulties—which are principally in the small schools—without working a hardship either to the individual or a school. The law requires a course of theory and practice in all the major branches of nursing covering three years. The instruction may be secured in one or more institutions; credits may be given for scientific subjects covered before entering the nursing school. In 1920 the minimum standards of the National League of Nursing Education were adopted by the Board of Examiners of Georgia, in response to a resolution of the Georgia State Nurses' Association, and these standards have not been advanced since that time, though the curriculum of the National League of Nursing Education has been increased by 300 hours. Our minimum calls for a theoretical course covering 520 to 580 hours during the three years, or about one hour of class or lecture instruction for every ten hours of practical work.

It is charged that "too much theory" is given, and that consequently graduate nurses do not do as good practical nursing as formerly. If this be true, it is undoubtedly due to the fact that the practical work of students is not properly supervised in the average school of nursing in Georgia. The suggested remedy to shorten the course from three years to two would not improve the situation. It would, indeed, aggravate it. One of two methods would have to be pursued—either giving more instruction in the shorter period of time, or exacting higher entrance requirements. We would have no "guarantee" that the increased number of graduates would be used to any greater extent than they are at present. We would need to take into our schools one-third more students every three-year period than at present, and the complaint of the small schools now is that they cannot get as many suitable applicants as they desire.

The small school cannot hope to compete with the larger and more standardized school of nursing, which has voluntarily raised its standards of entrance requirements and curricula above the required minimum because it believes that it guarantees better service to the sick in the hospital connected with it, unless it arranges somehow to supplement its instruction and experience by affiliations.

In 1922 the Board adopted the standard of two years of high school education or its equivalent for registration.* In order not to operate any injustice to the student upon completion of her course, the Board requests that the preliminary educational qualifications be agreed to when she enters the school, not when she graduates. The plan is working satisfactorily except in those few instances where the medical authorities of the hospital school have objected to this as unnecessary, and questioned the authority of the Board of Examiners in making this requirement.

Changes in educational requirements and in the curriculum of any state will affect nurses desiring registration in other states.** In Georgia we are graduating more nurses than can be absorbed by the communities in which they are graduated. The economic situation is becoming increasingly difficult for nurses. Is there any solution that does not involve reduction in the number of students?

Altogether, the problem is one for careful thought and consideration. The character of nursing under the present demands of the physician, the surgeon and the patient has become so widely divergent that the nurse's duties on the one hand embrace a technique for which a knowledge of scientific subjects is essential; while on the other hand, she must needs be the caretaker for the helpless and chronic invalid who needs not much more than custodial care.

Perhaps the time has come when several types of care or service are needed, and the attempt should not be made to require the same preliminary education and the same type of training for all. An attendant's course, covering nine months or one year and less theoretical instruction, and a course for nurses which shall be as technical as necessary to comply with the present demand for her services, might be a step in the right direction. In such case, should each hospital have a proportionate number of each group?

(Continued on Page 186)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

APRIL, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

WELCOME TO MACON

Eighty years ago this spring the first meeting of our present Association met in Macon. It is almost impossible to picture in one's mind just how this convention looked in 1849. We do know that at that time Macon was only a small struggling village and that the hotels were far different from what they are now. At that time my father was a ten year old barefoot boy playing on the streets of the town just one block from my present home and my office. Ninety years have come and gone since some member of our profession officiated here in Macon at his birth. It is far easier to picture the welcome given by the few Macon doctors in 1848 to their visiting friends than it is to picture the medical work done.

I can see the doctors of that day in their high hats and their long coats shaking hands with their friends as they came into town, and I can see them taking them to their homes to show that they were indeed welcome. As we all know, in those days no hotel was considered good enough for your friend to spend the night in, and seldom was it considered good enough to entertain one's friend in for dinner. This idea of genuine Southern hospitality was so engrafted into my father in this town of Macon in the days of his boyhood that it lasted him through life.

And so, when, 25 years ago this same spring, I first came to Macon to live and try to commence the practice of medicine, I also came into a convention of doctors. They were all strangers to me then, but never strange. I found within a very few hours men who signed their prescriptions with an "M.D." after their names who were at heart always more friends than doctors. I found in this town (for town it was then, and town it is now, although some of us insist on calling it a city), I found in this town many homes where the latch string always hung on the outside. I found homes where cold ham and chicken were always on the sideboard or in the closet. I found homes where cold bottles were always handy, and gardens where green mint always grew. I found that what made this town a town worth living in was not its wealth of cotton and of gold, but its wealth of hospitality. If I should live to be one hundred years old and should constantly try to offer hospitality and good cheer to visiting doctors to this old town in the heart of Georgia, I could not repay to the world the debt I owe for the kindness and hospitality given me as a young doctor and stranger 25 years ago this spring.

And so as I welcome you visiting friends, as the general chairman of the Bibb County Medical Society, I do so in the name of 73 men who must feel as I do about this town. Seventy-three homes and sideboards are bidding you welcome. The fatted calf will be killed, the fatted ham will be cold and ready to serve. Mild denarcotized sherry will be in the decanters on some sideboards to try and remind you of days that have gone. If you desire the feast of reason you may go to the meetings and sit at the feet of wisdom. If you desire the flow of soul, seventy-three homes are open to you to help you

find it, and there you may sit at ease, forgetting medicine, and forgetting patients. There I may again fight the Battle of Bordeaux with John Train, and there Fritz may again fight with Frank the Battles of the Argonne.

Our only hope and request is that during these few days, no Macon people may get sick, and that during these few days no visiting doctors bring their patients and their troubles to our town. Let us during three days try and forget that our life and very living comes from sickness, and during these three days leave our sickness and our troubles behind us.

We hope during the three days to help you find just what you wish to find. We do not wish to brag about what we have, nor do we wish you to wish for anything and find it not. Every Macon doctor will wear a Macon badge—and every one of us will know where everything is. We do think that there are a few things professional in Macon you might be interested in seeing—for they are in a way different. Nearly twenty years ago Dr. Howard Williams, a Past President of the State Association, decided that it would add to his pleasure and profit to put his office in his own small private hospital. This movement has grown in Macon until over one-third of the Macon physicians now have their offices in the private hospitals which they own. We think that you might be interested in seeing these offices and these small hospitals. They are not perfect of course—but we all find them extremely convenient and bid you welcome to visit them. All four of the hospitals, the Macon City Hospital and all three of the private hospitals will keep open house during the convention—open house for work if necessary but during this time primarily open house to welcome our friends.

Seventy-three homes are open to you and to yours, the men and the women in these homes bid you welcome.

Charles C. Harrold, M.D.,

General Chairman, Bibb County Medical Society.

Dr. Morris Fishbein, Chicago, Editor of the Journal of the American Medical Association, invited guest of the Association, will deliver an address at the annual session of the Association on Wednesday evening, May 8th.

CAT.

EMORY ALUMNI WEEK

The physicians of Atlanta are making arrangements for the clinic week of June 3 at Emory University.

The president of the Fulton County Medical Society, has appointed the following physicians on the Entertainment Committee: Hal M. Davison, Chairman; Charles E. Waits, Vice-Chairman; M. T. Harrison, E. A. Allen, George W. Fuller, H. M. McGehee, and W. P. Baker.

The Program Committee follows: W. E. Person, Chairman; Marion T. Benson, Joe P. Bowdoin, J. L. Campbell, and R. H. Oppenheimer, Dean, Emory University School of Medicine.

Every effort will be made to make this the most interesting and instructive clinic week that has been held at Emory. This will be the tenth annual clinic week.

DIAGNOSING THE SURGICAL GALL-BLADDER

Among surgical abdominal diseases, the incidence of cholecystitis, with or without gallstones, is second only to appendicitis. The diagnosis of an attack of acute cholecystitis or of a case of chronic cholecystitis, characterized by acute exacerbations extending over months or years, usually is not difficult. A history *listened to attentively,* with thorough physical and laboratory examinations, establish a correct diagnosis in the majority of cases.

It is the early case of chronic cholecystitis, or the case with milder or less typical symptoms than usual, that presents the hardest problem in diagnosis. The prompt recognition and proper treatment of such cases, moreover, is exceedingly important. By the removal of such a diseased viscus at the very beginning of its mischief-spreading course, not only the immediate trouble will be eliminated, but many disabling and disastrous complications may be avoided. Among these are stone in the common duct, pancreatitis, secondary liver changes, and even carcinoma.

On the other hand, it must not be forgotten that gallbladder surgery is serious business, and must not be advocated or undertaken without indications as positive as human insight can make them. Even after most painstaking study laparotomy not infrequently reveals a normal organ. Under such embarrassing circumstances the gallbladder must be left undisturbed, and search made elsewhere to explain the symptoms.

The use of the Graham dye-test by one experienced in its administration and interpretation may furnish valuable information. It must be remembered that this test is one of function rather than of disease. A negative result, that is one denoting a normal gallbladder, is more dependable than a positive result, apparently denoting a diseased organ. In the latter instance the positive indication may be due to failure of the liver to absorb the dye, or due to faulty technic in its administration.

Several purely medical diseases may give a picture simulating the mild or early case of cholecystitis. Visceroptosis is one of these. It is well known that this condition may imitate any pathological state in the abdomen, especially gallbladder disease and appendicitis. Syphilis of the liver must always be considered; DaCosta calls it a "very able actor." Various forms of colitis must be ruled out. Recently cases of intestinal allergy* have been reported as being mistaken for cholecystitis. The diagnositician also will recall that patients have been operated upon for suspected gallbladder disease when the real trouble was myocarditis, coronary occlusion, aortitis, or angina.

Other surgical conditions frequently are supposed to be cholecystitis, and differentiation may be impossible. If the pathology happens to be abdominal, involving the appendix, pancreas, stomach or duodenum, the damage of the operation may be only to the surgeon's pride, but if, as has been recorded, the symptoms are caused by a spinal cord tumor, or spinal caries, the patient has been submitted to an unnecessary and unsuccessful procedure.

It is only by keeping wide-awake to the possibilities in each case that we may minimize our percentage of error in diagnosis. Preconceived ideas must be discarded, and every case approached with an unprejudiced mind. And finally, oils and external applications and non-surgical drainage will not cure organic gallbladder disease.

F. K. BOLAND, M.D.

*Alexander and Eyerman: Food Allergy in Henoch's Purpura, American Jour. of Diseases of Children, 1927, 16, 322.

STATE BOARD OF MEDICAL EXAMINERS OF GEORGIA

Officers and Members

Dr. H. F. McDuffie, Atlanta, President.
Dr. T. J. McArthur, Cordele, Vice-President.
Dr. B. T. Wise, Americus, Secretary-Treasurer.
Dr. O. B. Walker, Bowman.
Dr. J. O. Elrod, Forsyth.
Dr. A. F. White, Flovilla.
Dr. C. M. Paine, Atlanta.
Dr. R. F. Wheat, Bainbridge.
Dr. Luke Robinson, Covington.
Dr. C. F. Griffith, Griffin.

EIGHTIETH ANNUAL SESSION
MEDICAL ASSOCIATION OF GEORGIA
MACON
MAY 8, 9, 10

Medical Association of Georgia

Eightieth Annual Session

MACON

May 8, 9, 10, 1929

OFFICIAL PROGRAM

OFFICERS

President ..... C. K. Sharp, Arlington
President-Elect ..... William R. Dancy, Savannah
First Vice-President ..... W. E. McCurry, Hartwell
Second Vice-President ..... M. Hines Roberts, Atlanta
Secretary-Treasurer ..... Allen H. Bunce, Atlanta
Parliamentarian ..... M. A. Clark, Macon

DELEGATES TO THE A. M. A.

Allen H. Bunce (1927-29) ..... Atlanta
Alternate, J. W. Palmer ..... Ailey
William H. Myers (1928-30) ..... Savannah
Alternate, William A. Mulherin ..... Augusta
E. C. Thrash (1928-30) ..... Atlanta
Alternate, C. W. Roberts ..... Atlanta

BIBB COUNTY MEDICAL SOCIETY

OFFICERS

President ..... C. L. Ridley
Vice-President ..... H. G. Weaver
Secretary-Treasurer ..... R. C. Goolsby, Jr.
Delegate ..... W. E. Mobley
Delegate ..... J. D. Applewhite

BOARD OF CENSORS

G. Y. Massenburg.
W. L. Bazemore.
F. L. Webb.

LIBRARIAN

W. A. Newman.

GENERAL COMMITTEE ON ARRANGEMENTS

C. C. Harrold, Chairman.
G. Y. Massenburg.
J. D. Applewhite.
R. G. Newton.
J. C. Anderson.
C. H. Richardson, Jr.

ENTERTAINMENT

C. H. Richardson, Jr., Chairman.
W. L. Bazemore.
G. Y. Massenburg.
B. W. Greene.
J. A. Fountain.

RECEPTION AND HOTELS

J. A. Fountain, Chairman.
Thomas Harrold.
O. S. Spivey.

TRANSPORTATION

B. W. Greene, Chairman.
J. F. Adams.
O. F. Keen.
D. D. Walker.

REFRESHMENTS

W. E. Mobley, Chairman.
G. Y. Massenburg.
O. H. Weaver.

BANQUET

W. L. Bazemore, Chairman.
O. R. Thompson.
H. G. Weaver.

GOLF

J. A. Selden, Chairman.

TRAPSHOOTING

J. C. McAfee, Chairman.
Herbert Respess.

COUNCIL

Chairman ..... M. M. Head, Zebulon
Clerk ..... C. L. Ayers, Toccoa
Secretary ..... Allen H. Bunce, Atlanta
First District ..... Wm. H. Myers, Savannah
Vice-Councilor ..... C. Thompson, Millen
Second District ..... J. A. Redfearn, Albany
Vice-Councilor ..... R. F. Wheat, Bainbridge
Third District ..... G. Y. Moore, Cuthbert
Vice-Councilor ..... Charles A. Greer, Oglethorpe
Fourth District ..... O. W. Roberts, Carrollton
Vice-Councilor ..... W. H. Clarke, LaGrange
Fifth District ..... E. C. Thrash, Atlanta
Vice-Councilor ..... W. A. Selman, Atlanta
Sixth District ..... M. M. Head, Zebulon
Vice-Councilor ..... J. M. Anderson, Barnesville (Deceased).
Seventh District ..... M. M. McCord, Rome
Vice-Councilor ..... W. H. Perkinson, Marietta
Eighth District ..... H. M. Fullilove, Athens
Vice-Councilor ..... Paul L. Holliday, Athens
Ninth District ..... C. L. Ayers, Toccoa
Vice-Councilor ..... J. K. Burns, Jr., Gainesville
Tenth District ..... S. J. Lewis, Augusta
Vice-Councilor ..... H. D. Allen, Jr., Milledgeville
Eleventh District ..... A. S. M. Coleman, Douglas
Vice-Councilor ..... K. McCullough, Waycross
Twelfth District ..... J. Cox Wall, Eastman
Vice-Councilor ..... Austin L. Smith, Cochran

COMMITTEES

SCIENTIFIC WORK

Wm. A. Mulherin, Chairman ..... Augusta
C. W. Roberts ..... Atlanta
A. H. Bunce, Secretary-Treasurer ..... Atlanta

PUBLIC POLICY AND LEGISLATION

Charles E. Waits, Chairman ..... Atlanta
J. W. Palmer ..... Ailey
A. R. Rozar ..... Macon
C. K. Sharp, President ..... Arlington
A. H. Bunce, Secretary-Treasurer ..... Atlanta
T. F. Abercrombie, Commissioner of Health, State of Georgia ..... Atlanta

MEDICAL DEFENSE

M. A. Clark, Chairman ..... Macon
E. C. Davis ..... Atlanta
E. C. Thrash ..... Atlanta
M. M. Head, Chairman, Council ..... Zebulon
A. H. Bunce, Secretary-Treasurer ..... Atlanta

HOSPITALS

C. S. Lentz, Chairman ..... Augusta
Grady N. Coker, Secretary ..... Canton
B. T. Wise ..... Plains
George F. Klugh ..... Atlanta
Julian K. Quattlebaum ..... Savannah

ABNER WELLBORN CALHOUN LECTURESHIP

James E. Paullin, Chairman ..... Atlanta
G. B. Smith ..... Rome
E. E. Murphey ..... Augusta
Craig Barrow ..... Savannah
Frank K. Boland ..... Atlanta

NECROLOGY

E. C. McCurdy, Chairman ..... Shellman
R. L. Miller ..... Waynesboro
O. H. Weaver ..... Macon

HEALTH AND PUBLIC INSTRUCTION

Theodore Toepel, Chairman ..... Atlanta
Paul Eaton ..... Augusta
V. H. Bassett ..... Savannah
C. K. Sharp, President ..... Arlington
A. H. Bunce, Secretary-Treasurer ..... Atlanta

MEDICAL HISTORY OF GEORGIA

E. C. Thrash, Chairman ..... Atlanta
Frank K. Boland ..... Atlanta
M. A. Clark ..... Macon
C. K. Sharp, President ..... Arlington
A. H. Bunce, Secretary-Treasurer ..... Atlanta

CANCER COMMISSION

J. L. Campbell, Chairman ..... Atlanta
Charles Usher ..... Savannah
C. K. Wall ..... Thomasville
G. Y. Moore ..... Cuthbert
C. A. P. Ebbert ..... Grantville
A. R. Rozar ..... Macon
R. M. Harbin ..... Rome
M. B. Allen ..... Hoschton
C. D. Whelchel ..... Gainesville
G. T. Bernard ..... Augusta
W. F. Reavis ..... Waycross
J. C. Wall ..... Eastman
E. L. Bishop ..... Atlanta

DELEGATES TO THE 1929 SESSION

Counties	Delgates
Baldwin	H. D. Allen, Jr., Milledgville
Barrow	
Bartow	T. Lowry, Cartersville
Ben Hill	L. S. Osborne, Fitzgerald
Bibb	J. D. Applewhite, Macon W. E. Mobley, Macon
Blue Ridge	C. B. Crawford, Blue Ridge
Bulloch-Candler	
Brooks	J. R. McMichael, Quitman
Burke	R. L. Miller, Waynesboro
Butts	A. F. White, Flovilla
Campbell	R. T. Camp, Fairburn
Carroll	E. G. Kirby, Bowdon
Chatham	Wm. Shearouse, Savannah H. H. McGee, Savannah
Chattooga	R. E. Talley, Trion
Cherokee	Thos. J. Vansant, Woodstock
Clarke	C. J. Decker, Athens
Clayton-Fayette	
Cobb	W. H. Perkinson, Marietta
Coffee	S. L. Vinson, Douglas
Colquitt	C. C. Brannen, Moultrie
Cobb	W. H. Perkinson, Marietta
Cook	P. H. Askew, Nashville
Coweta	
Crisp	T. J. McArthur, Cordele
Decatur-Seminole	
DeKalb	W. S. Ansley, Decatur
Dooly	L. H. Bishop, Unadilla
Douglas	
Dougherty	W. L. Davis, Albany
Elbert	
Emanuel	E. T. Coleman, Graymont
Evans	
Floyd	G. B. Smith, Rome
Forsyth	
Franklin	B. T. Smith, Carnesville
Fulton	
Glynn	
Gordon	W. G. Banister, Plainville
Grady	
Greene	
Gwinnett	
Habersham	
Hancock	C. S. Jernigan, Sparta
Hall	
Hart	G. T. Harper, Dewy Rose
Henry	R. L. Tye, McDonough
Houston-Peach	
Jasper	R. F. Cary, Monticello
Jackson	E. M. McDonald, Jefferson
Jefferson	V. L. Bryant, Bartow
Jenkins	Q. A. Mulkey, Millen
Jones	
Johnson	

Lamar	J. A. Corry, Barnesville
Laurens	C. A. Hodges, Dublin
Lowndes	J. F. Mixson, Valdosta
Macon	
Madison	G. L. Loden, Colbert
Meriwether	
Mitchell	J. R. Clements, Pelham
Monroe	G. H. Alexander, Forsyth
Montgomery	
Murray	
Morgan	W. C. McGeary, Madison
Muscogee	
Newton	
Ocmulgee	A. R. Bush, Hawkinsville
Pickens	
Pike	J. H. Grubbs, Molena
Polk	P. O. Chaudron, Cedartown
Putnam	
Randolph	T. F. Harper, Coleman
Rabun	J. C. Dover, Clayton
Richmond	G. Lombard Kelly, Augusta Ralph H. Chaney, Augusta
Screven	H. W. Doster, Rocky Ford
Spalding	W. C. Miles, Griffin
Stephens	E. F. Chaffin, Toccoa
Stewart-Webster	C. E. Pickett, Richland
Sumter	B. T. Wise, Americus
Taliaferro	John A. Rhodes, Crawfordville
Tattnall	
Talbot	G. L. Carter, Talbotton
Taylor	R. C. Montgomery, Butler
Telfair	Frank Mann, McRae
Terrell	J. G. Dean, Dawson
Thomas	
Tift	N. Peterson, Tifton
Toombs	
Tri- (Early, Miller, Calhoun)	J. G. Standifer, Blakely
Tri- (Liberty, Long, McIntosh)	
Turner	
Troup	C. O. Williams, West Point
Treutlen	
Twiggs	
Upson	B. C. Adams, Thomasville
Walker	J. S. Alsobrook, Rossville
Walton	
Ware	W. R. Reavis, Waycross
Warren	A. W. Davis, Warrenton
Washington	E. S. Peacock, Harrison
Wayne	J. L. Tyre, Screven
Whitfield	Trammell Starr, Dalton
Wilkes	H. T. Harriss, Washington
Worth	H. S. McCoy, Sylvester

FRATERNAL DELEGATES TO OTHER STATE MEETINGS

To visit Alabama: R. F. Wheat, Bainbridge; J. C. Patterson, Cuthbert.

To visit Florida: K. McCullough, Waycross; Gordon Chason, Bainbridge.

To visit North Carolina: Paul L. Holliday, Athens; Hal M. Davison, Atlanta.

To visit South Carolina: V. P. Sydenstricker, Augusta; C. S. Jernigan, Sparta.

ANNOUNCEMENTS

Meetings will be held in the City Auditorium, Macon.

Be sure to go to the Registration Desk, present your 1929 card and procure a badge immediately on your arrival.

Discussion of papers is open to all members and guests of the Association. It is not limited to those named on the program.

On arising to discuss a paper the speaker will please announce his name and address clearly for the benefit of the Association and stenographer.

Meetings will be called to order at the hour fixed on the program. It is especially desired that the members be prompt in their attendance.

All manuscripts should be typewritten, double spaced and on one side of the paper only. Papers must be handed to the Secretary immediately after being read.

IMPORTANT NOTICE

Delegates must present written credentials to the Committee on Credentials from the House of Delegates to secure Delegates' Badges.

Members may not take part in the proceedings until they have registered and procured official badges.

PUBLIC MEETINGS

WEDNESDAY, MAY 8, 10:00 A. M.
OPENING MEETING

THURSDAY, MAY 9, 12 NOON
PRESIDENT'S ADDRESS

The President's Address will be at an open session to which the public and visitors are invited.

ENTERTAINMENTS

Golf courses at the Idle Hour Club and the Municipal Links will be open to members Wednesday and Thursday afternoons.

Trap shooting at the Macon Gun Club on Wednesday and Thursday afternoons. Participants are expected to bring guns.

TUESDAY, MAY 7
9 to 12 P. M.

Reception and dance for the members of the Association and the Woman's Auxiliary.

WEDNESDAY, MAY 8, 6:30 P. M.

Annual dinner of the alumni of the University of Georgia Medical Department, Hotel Dempsey.

Annual dinner of the alumni of Emory University School of Medicine, Hotel Dempsey.

THURSDAY, MAY 9
7 to 10 P. M.

Chas. C. Harrold—Toastmaster.

Buffet Dinner at the Idle Hour Club.

Presentation of "Badge of Service" to the President,

C. K. Sharp by J. A. Redfearn, Albany.

10 P. M. to 1 A. M.

DANCE

SPECIAL MEETINGS

MEETING OF SECRETARIES OF DISTRICT AND COUNTY SOCIETIES

Round table conference of the Secretaries of District and County Societies, Thursday, May 9, 5:30 P. M., Convention Room, Hotel Dempsey. All Secretaries of District and County Societies are expected to be present. Each one will be called upon for a report of conditions in his Society and suggestions for improvement of the organization. The President, President-Elect, members of the Council and all general officers of the Association will be present.

MEETING OF THE COUNCIL

The first meeting of the Council will be held in the Convention Room of Hotel Dempsey, May 7, at 5:00 P. M. Each Councilor will render a written report of conditions in each county of his district. Other meetings of the Council will be held on the call of the Chairman.

MEETINGS OF THE HOUSE OF DELEGATES CONVENTION ROOM, HOTEL DEMPSEY,

TUESDAY, MAY 7, 2:00 P. M.

First meeting of the House of Delegates.

1. Call to order by the President.
2. Roll Call.
3. Report of Officers:
   - President.
   - President-Elect.
   - Vice-Presidents.
   - Parliamentarian.
   - Secretary-Treasurer.
4. Report of Council by the Chairman.
5. Report of Committees:
   - a. Scientific Work.
   - b. Public Policy and Legislation.
   - c. Arrangements.
   - d. Medical Defense.
   - e. Hospitals.
   - f. Necrology.
   - g. Health and Public Instruction.
   - h. Cancer Commission.
   - i. History.
   - j. Constitution and By-Laws.
   - k. Abner Wellborn Calhoun Lectureship.
6. Report of Delegates to the A. M. A.
7. Report of Fraternal Delegates.
8. Unfinished business.
9. New business.

THURSDAY, MAY 9, 8:00 A. M.

Second meeting of the House of Delegates.

1. Call to order by the President.
2. Reading of minutes.
3. Report of committees.
4. Unfinished business.
5. New business.

PROGRAM

The papers for each meeting must be read as scheduled on the program.

WEDNESDAY, MAY 8, 1929

CITY AUDITORIUM

10:00 A. M.

Call to order by the President, C. K. Sharp, Arlington.

INVOCATION

Dr. W. F. Quillian ..... Macon
President of Wesleyan College

WELCOME

M. A. Clark ..... Macon

RESPONSE TO ADDRESS OF WELCOME

G. Y. Moore ..... Cuthbert

SCIENTIFIC PAPERS

1. Some Homely Truths About the Heart
   W. W. Jarrell, Thomasville.

2. Quinidine in the Treatment of Heart Diseases.
   Thomas J. Charlton, Savannah.
   To lead the discussion of Nos. 1 and 2:
   H. M. Bowcock, Atlanta.
   Harold I. Reynolds, Athens.

3. Glaucoma Simplex
   Gray Clay, Atlanta.
   Eugene Vernou, Atlanta.

4. Glaucoma From the General Practitioner's View
   F. Phinizy Calhoun, Atlanta.
   To lead the discussion of Nos. 3 and 4:
   B. H. Minchew, Waycross.
   W. H. Cabaniss, Athens.
   G. H. Lang, Savannah.

Abner Wellborn Calhoun Lecture—Arthritis.

William S. Baer, Associate Professor of Clinical Othopedic Surgery, Johns Hopkins University School of Medicine, Baltimore.

WEDNESDAY, MAY 8, 2:30 P. M.

CLINICS

5. Gall Bladder Disease
   A. R. Rozar, Macon.
   T. C. Davison, Atlanta.

6. Mycosis Fungoides
   G. Y. Massenburg, Macon.
   A. A. Rayle, Athens.

7. Pernicious Anemia
   T. E. Rogers, Macon.
   V. P. Sydenstricker, Augusta.

8. Heart Case
   William C. Pumpelly, Macon.
   Hal M. Davison, Atlanta.

9. Heart Case
   J. A. Fountain, Macon.

E. C. Thrash, Atlanta.

10. Scleroderma
C. C. Harrold, Macon.
R. H. Fike, Atlanta.

11. Post Operative Pulmonary Atelectasis
C. H. Richardson, Jr., Macon.
A. J. Mooney, Statesboro.

WEDNESDAY, MAY 8, 8:00 P. M.

12. Our Poisonous Serpents
T. E. Oertel, Augusta.

13. The Challenge of Industry to Present Day Medicine
C. W. Roberts, Atlanta.

Address: "Quacks and Quackery."
Morris Fishbein, Chicago, Editor of the Journal of the American Medical Association, invited guest of the Association.

THURSDAY, MAY 9, 9:00 A. M.

14. Spinal Anesthesia—Use of Spinocain in 100 cases.
George W. Fuller, Atlanta.

15. Spinal Anesthesia in Obstetrics
Lewis H. Wright, Augusta.
To lead the discussion of Nos. 14 and 15:
T. P. Waring, Savannah.
Grady N. Coker, Canton.

16. Learning Therapeutics
W. R. Houston, Augusta.
To lead the discussion:
R. H. Oppenheimer, Emory University.
John W. Daniel, Savannah.

17. Nevi
Jack W. Jones, Atlanta.
To lead the discussion:
C. D. Whelchel, Gainesville.
E. D. Highsmith, Atlanta.

18. Enlargement of the Cervical Lymph Nodes
D. C. Elkin, Atlanta.
To lead the discussion:
W. W. Battey, Augusta.
C. H. Watt, Thomasville.

Certain Splenic Syndromes with Indications for Splenectomy, Leora G. Bowers, Dayton, Ohio. Invited guest of the Association.

THURSDAY, MAY 9, NOON

President's Address

C. K. Sharp, Arlington

THURSDAY, MAY 9, 2:30 P. M.

19. Clinics for Children of the Pre-School Age in Atlanta
Lewis H. Hoppe, Atlanta.
To lead the discussion:
A. J. Waring, Savannah.
W. L. Funkhouser, Atlanta.

20. Psychiatric Studies Among School Children
George L. Echols, Milledgeville.
To lead the discussion:
H. D. Allen, Jr., Milledgeville.
N. M. Owensby, Atlanta.

21. A Report of Six Years Study of the Intraperitoneal Use of Neoarsphenamine and Mercurosal in Congenital Lues
Joseph Yampolsky, Atlanta.
To lead the discussion:
George F. Klugh, Atlanta.
Linton Gerdine, Athens.

22. The Increasing Importance of Undulant Fever
Evert A. Bancker, Jr., Atlanta.
To lead the discussion:
Paul Eaton, Augusta.
Allen H. Bunce, Atlanta.

23. Agranulocytosis—Report of Two Cases
J. D. Gray, Augusta.
To lead the discussion:
R. T. Dorsey, Atlanta.
Irvine Phinizy, Augusta.

24. The Epilepsies
William A. Smith, Atlanta.
To lead the discussion:
E. Bates Block, Atlanta.
R. C. Swint, Milledgeville.

25. Position of the Radiologist
Robert Drane, Savannah.
To lead the discussion:
James J. Clark, Atlanta.
Robert C. Pendergrass, Americus.

FRIDAY, MAY 10, 9:00 A. M.

26. The Sesamoid Bones, Important Factors in Deformities of the First Metatarso Phalangeal Joint—Lantern Slides.
Theodore Toepel, Atlanta.
To lead the discussion:
H. M. Michel, Augusta.
Lawson Thornton, Atlanta.

27. Perforation of Gastric and Duodenal Ulcer
J. C. Patterson, Cuthbert.

28. Results of Surgical Treatment of Gastric and Duodenal Ulcer
Julian K. Quattlebaum, Savannah.
To lead the discussion of Nos. 27 and 28:
L. W. Grove, Atlanta.
William H. Myers, Savannah.

29. Some Problems In Gynecology
Marion T. Benson, Atlanta.
To lead the discussion:
William H. Goodrich, Augusta.
William L. Cooke, Columbus.

30. Mesenteric Cysts With Intestinal Obstruction

Ralph H. Chaney, Augusta.
To lead the discussion:
A. H. Hilsman, Albany.
C. D. Whelchel, Gainesville.

31. A New Mode of Artificial Insemination in the Guinea Pig.
G. Lombard Kelly, Augusta.
To lead the discussion:
Homer R. Blincoe, Emory University.
Edgar R. Pund, Augusta.

ALTERNATES

1. Allergic Reactions In Children With Special Reference to Digestive Disorders
Lee Bivings, Atlanta.

2. Treatment of Varicose Veins With Sclerosing Solutions
C. E. Rushin, Atlanta.

3. The Treatment of Procidentia Uteri
Olin S. Cofer, Atlanta.

ELECTION OF OFFICERS

President-Elect.
First Vice-President.
Second Vice-President.
Delegate to the A. M. A.
Councilors for the Ninth, Tenth, Eleventh and Twelfth Districts.
Selection of meeting place for 1930.

IN MEMORIAM*

Aaron, Ira E., Lyons, July 20, 1928.
Anderson, John M., Barnesville, February 20, 1929.
Baker, Hinton J., Augusta, December 28, 1928.
Barwick, George M., Soperton, January 9, 1929.
Brown, John L., Camilla, January 30, 1929.
Bullard, John M., Machen, March 4, 1929.
Byron, J. Lee, Jackson, June 18, 1928.
Carswell, Nathaniel T., Macon, May 1, 1928.
Carter, Edmund W., Thomaston, October 26, 1928.
Carter, Henry G., Atlanta, April 4, 1929.
Daniel, Eugene L., Atlanta, July 4, 1928.
Elkin, Archibald, Atlanta, March 29, 1929.
Etheridge, Samuel G., Sparks, June 16, 1928.
Fitzgerald, Philip H., Blakely, April 30, 1928.
Griffin, Pierce E., Edison, March 23, 1929.
Harris, Eugene A., Sandersville, June 18, 1928.
Julian, George W., Tifton, May 29, 1928.
Martin, Gordon F., Menlo, December, 1928.
Martin, Henry H., Savannah, June 12, 1928.
Monroe, D. H., Emerson, August 22, 1928.
Montgomery, Charles J., Augusta, January 14, 1928.
Quillian, Wiley H., Thomaston, March 16, 1929.
Riden, Claude F., Bostwick, November 22, 1928.
Rudolph, John Boyd, Gainesville, April 10, 1929.
Shankle, Olin E., Commerce, March 31, 1929.
Smith, Henry A., Americus, April 17, 1929.
Stow, Micollius N., Jesup, December 14, 1928.
Underwood, Julius M., LaFayette, January 2, 1929.
Whelchel, Henry C., Douglas, April 2, 1929.

*This is the list of members who have died since our last annual session as it appears on our records. Please notify the Secretary-Treasurer immediately of any errors or omissions.

SCIENTIFIC EXHIBITS

Lobby of City Auditorium

Anatomical Drawings—

Davis-Fischer Sanatorium, Atlanta.

Bibb County Medical Society, Macon.

Cancer and Allied Diseases—
Albert Steiner Clinic, Atlanta.

Dermatology—
Howard Hailey, M.D., Atlanta.

Electrocardiograms with Clinical Findings Demonstrating the Diagnostic Value of Electrocardiography—Allen H. Bunce, M.D., and Evert A. Bancker, Jr., M.D.

Emory University School of Medicine, Emory University.

Georgia Medical Society, Savannah.

History of Branham's Sign—
H. M. Branham, M.D., Brunswick.

John D. Archbold Memorial Hospital, Thomasville.

Neurology and Neuro-Surgery—
C. E. Dowman, M.D., Wm. A. Smith, M.D., Atlanta.

Ophthalmology and Oto-Laryngology—
Murdock, Equen, M.D.; A. G. Fort, M.D.; Hugh M. Lokey, M.D., Atlanta.

Orthopedics—
Michael Hoke, M.D.; Lawson Thornton, M.D.; Theodore Toepel, M.D., Atlanta.

Pediatrics—
M. Hines Roberts, M.D., Atlanta.

Surgery—
Frank K. Boland, M.D.; George W. Fuller, M.D.; E. D. Highsmith, M.D.; Charles E. Waits, M.D., Atlanta.

Tuberculosis-Prevention and Arrest—
Tuberculosis Association of Atlanta.

Undulant Fever—
E. A. Bancker, Jr., M.D., Atlanta.
University of Georgia Medical Department, Augusta.

Urology—
E. G. Ballenger, M.D.; Omar F. Elder, M.D.; Earl

Floyd. M.D.; H. P. McDonald, M.D., Atlanta.

X-Ray—
J. J. Clark, M.D., and J. W. Landham, M.D., Atlanta.

COMMERCIAL EXHIBITS

Lobby of City Auditorium

1. Cameron's Surgical Specialty Co., Chicago—Specialties in Surgical Supplies.
2. C. V. Mosby Co., St. Louis—Medical Publishers.
3. Hanovia Chemical & Manufacturing Co., Newark, N. J.
Alpine Sun and Kromayer Lamps.
4. S. & H. X-Ray Co., Atlanta—Keleket X-Ray and Diathermy Units, Hanovia Alpine Sun Lamps, Accessories and Supplies.
5. H. G. Fischer & Company, Chicago—X-Ray and Electro Therapeutic Equipment.
6. Horlick's Malted Milk Corporation, Racine—Horlick's Food for Infants and Invalids, Horlick's Malted Milk Lunch Tablet, Horlick's Diastoid.
7. American Optical Co., Atlanta—Tillyer Lenses—Accurate to the very edge.

8-9. E. R. Squibb & Sons, New York City—Manufacturing Chemists to the Medical Profession.

10-11. Max Wocher & Son Co., Cincinnati—Surgical Instruments, Hospital and Physicians' Supplies.

12. Victor X-Ray Corporation, Atlanta—X-Ray Machines, Lamps and Tables for Physicians' offices and Hospitals, Ultra-Violet Lamps.
13. Surgical Selling Company, Atlanta—Surgical Instruments, Hospital Furniture and Sterilizers, Anesthesia and Suction Apparatus, Nitrous Oxide, Oxygen and Ethylene Gas.
14. Mead Johnson & Co., Evansville—Infant Diet Materials.
15. Deshell Laboratories, Inc., Chicago—Petrolager.
16. W. B. Saunders Co., Philadelphia—Medical Publishers.

17-18. Estes Surgical Supply Co., Atlanta—Surgical Instruments, Physicians and Hospital Supplies, Drugs, Chemicals and Laboratory Equipment.

19. Nestle's Food Co., Inc., New York City—Lactogent Materials for Infant Diet.
20. American Express Co., Atlanta—Transportation.
29. A. S. Aloe Co., St. Louis—Physio-Therapy Equipment, Hospital Supplies, Orthopedic Apparatus.

CONSTITUTION AND BY-LAWS OF THE MEDICAL ASSOCIATION OF GEORGIA

Constitution.

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Medical Association of Georgia.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Georgia; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state and medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component societies shall consist of those county societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

Section I. This Association shall consist of members and delegates.

Sec. 2. Members: The members of this Association shall be the members of the component county medical societies to which only white physicians shall be eligible.

Sec. 3. Delegates: Delegates shall be those members who are elected in accordance with this constitution and by-laws to represent their respective component societies in the House of Delegates of this Association.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of the Association, and shall consist of: (1) delegates elected by the component county societies; (2) the officers of the Association enumerated in Section 1 of Article IX of the Constitution; (3) ex-presidents and delegates to the American Medical Association.

ARTICLE VI.—COUNCIL

The Council shall be the Board of Trustees and Finance Committee of the Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into session as provided in the Constitution and By-Laws.

It shall consist of the Councilors, the President, the President-Elect and the Secretary-Treasurer of the Association. Five of its members shall constitute a quorum.

ARTICLE VII.—SESSIONS AND MEETINGS

Section 1. The annual sessions shall take place on the second Wednesday in May at such place as shall be designated by the Association, provided that in case of conflict with the meeting of the American Medical Association the Council may change the date by publishing a notice in the Journal of the Medical Association of Georgia three months before the session.

Sec. 2. Special meetings of either the Association or the House of Delegates may be called by a two-thirds vote of the Council, or upon the petition of twenty delegates.

ARTICLE VIII.—SECTIONS AND DISTRICT SOCIETIES

Section 1. The House of Delegates may provide for a division of the scientific work of the Association into appropriate sections, and for the organization of such Councilor district societies as will promote the best interests of the profession, such societies shall be composed exclusively of members of component county societies.

ARTICLE IX.—OFFICERS

Section 1. The officers of this Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and twelve Councilors, one from each congressional district of the state.

Sec. 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual meeting of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume his office as President immediately after the next annual meeting following his election. The terms of the Councilors shall be for three years, as may be arranged, viz: the councilors from the first, second, third and fourth districts for three years; those for the fifth, sixth, seventh and eighth districts for two years; those for the ninth, tenth and eleventh districts for one year (1905); councilor from the twelfth district to be elected with the ninth, tenth and eleventh for the full term of three years. The secretary-treasurer shall be elected for a term of five years, and the parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Association shall be elected by ballot, and without nomination, at 12 o'clock noon, on the third day of the annual session. The Councilors shall be elected at the same time, but on nomination by their respective District Societies at the annual meeting of such Societies preceding the meeting of the Association at which the vacancy occurs. If there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on the second ballot, the two names receiving the highest number of ballots shall be voted on until an election occurs. Delegates to the American Medical Association shall be elected at the same time and in the same manner.

ARTICLE X.—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall not exceed the sum of $5 per capita per annum. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be approved by the Finance Committee before action is taken thereon.

ARTICLE XI.—RATIFICATION

The House of Delegates shall submit all questions before it to the Association for ratification.

ARTICLE XII—THE SEAL

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIII.—AMENDMENTS

Any amendment that may be offered to the Constitution shall lie over until the next annual session; and for its adoption at such session shall require a two-thirds vote of all present and voting.

By-Laws

CHAPTER I—MEMBERSHIP

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been

verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 4. Any member for old age, length of service, or other good reasons, may upon recommendation of the Board of Censors, be elected to honorary membership of his county society without dues. Such member shall be enrolled as an honorary member of his county society and the Association, and shall be entitled to all the privileges of the Association.

CHAPTER II.—GENERAL MEETINGS

Sec. 1. All registered members may attend and participate in the proceedings and discussions of the general meetings. Visitors duly accredited to represent the Association of other states, or of the District of Columbia, not exceeding two in number for each organization, may attend upon, and participate in the discussion of the general meetings, but shall not have a vote. Such delegates may read papers upon invitation of the Committee on Scientific Work. The general meetings shall be presided over by the President or by one of the Vice-Presidents.

Sec. 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, not more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Sec. 3. Entertainments. Any social entertainment which may be given by this Association shall be confined to the evening of the second day.

Sec. 4. Guests. Any physician not a resident of this state but a member of his state association, or any distinguished scientist not a physician, may be counted a guest during any annual session on invitation of the President, and shall be accorded the privilege of participating in the scientific work of that session.

CHAPTER III.—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet on the day preceding the first day of the annual session, the time to be fixed by the Committee on Scientific Work. It may adjourn from time to time as may be necessary to complete its business; provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate. Should the regular delegate from any county not be present at the meeting, the President shall appoint a substitute from that county to act.

Sec. 3. Twenty delegates present shall constitute a quorum.

Sec. 4. It shall through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interests in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until if possible every physician in every county of the State has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized, and intelligently discussed in the county societies.

Sec. 8. It shall divide the State into councilor districts, one for each congressional district, and when the best interests of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate thereon.

CHAPTER IV.—DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event

of the President's death, resignation or removal, the Vice-Presidents, in their order, shall succeed him.

In order to give him a better opportunity of becoming better acquainted with his duties and with the needs of the Association, the President shall be elected one year prior to taking office. During this time he shall be known as President-Elect.

Sec. 3. The Secretary-Treasurer shall give bond in the sum of One Thousand Dollars. He shall demand and receive all funds due the Association, together with the bequests and donations.

Sec. 4. The Secretary-Treasurer shall attend the general meetings of the Association and the meetings of the House of Delegates, and shall keep the minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record-books and papers belonging to the Association. He shall provide for the registration of the members, delegates and accredited visitors at the annual session. He shall with the co-operation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and on request transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates with the approval of the Association, and shall make an annual report to the Association. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment and collect the same. Acting with the committee on scientific work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Association. He shall be editor of the Journal of the Medical Association of Georgia. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

He shall furnish a balance sheet at each annual meeting for the past fiscal year to be published in the Journal. This shall consist of an itemized statement of all financial transactions of the past year, all accounts made, money received and from whom and all moneys disbursed, to whom, and for what purpose, with vouchers attached. A fiscal year includes the period of time between the first day of May and the last day of April.

CHAPTER V.—COUNCIL

Section 1. The Council shall meet on the day preceding the annual session and daily during the session, and at such other times as necessity may require, subject to the approval of the President. It shall meet on the last day of the annual session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates. It shall be the business body of the Association and attend to the business of the Association in the interim between meetings.

Sec. 2. Each Councilor shall be organizer and peacemaker for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a properly itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association. Each Councilor may appoint a Vice-Councilor to assist him in the performance of his duties in that district.

Sec. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of a component society, on which an appeal is taken from the decision of an individual Councilor, or to which attention has been called by the Councilor or interested members. It shall hear and decide all questions affecting unethical conduct on the part of any member at any annual session, and its decision in all such matters shall be final when ratified by the Association.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the Journal of the Medical Association of Georgia, which is the organ of the Association, and all money paid into the treasury as dues shall be received as subscriptions to the Journal.

All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Secretary-Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Secretary-Treasurer and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary-Treasurer, the Council shall fill the vacancy until the next annual election.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association, shall be referred to the Journal of the Medical Association of Georgia for publication. The editor, with the consent of the Councilor for the district in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial exhibits during the annual sessions shall be within the control and direction of the Council.

Sec. 8. In the absence of a Councilor and Vice-Councilor the President is empowered to appoint a representative from the district as acting Councilor, who shall have full rights and power of a Councilor.

Sec. 9. Each Councilor shall render at every session a written report of each county in his district.

Sec. 10. Any member of the Council who fails to attend two regular successive sessions of the Council, or whose district does not show evidences of the performance of his duties during the year, unless he renders an acceptable excuse to the Council subject to have his position declared vacant by the President and a successor appointed by the President.

CHAPTER VI.—COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangements.

A Committee on Medical Defense, and such other committees as may be necessary.

Sec. 2. The Committee on Scientific Work shall consist of three members of which the Secretary-Treasurer shall be one, and shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

This By-Law shall not prohibit the Committee on Scientific Work from inviting not more than two distinguished members of the national organization to deliver addresses or read papers at any annual meeting.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary, the Commissioner of Health of the State of Georgia, and a sub-committee of three members from each Councilor District appointed by the chairman when needed. It shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Sec. 4. The Committee on Arrangements shall be appointed by the component society in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the Association and of the House of Delegates and, of their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary-Treasurer for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Committee on Medical Defense shall consist of five members, of whom the Chairman of the Council and the Secretary-Treasurer of the Association shall be members. The other members, one of whom shall act as Chairman of the Committee, shall be elected by the Council for a period of five years. Those elected at this meeting (April 19, 1916), shall serve one, three and five years, respectively.

It shall be the duty of the Committee on Medical defense to investigate and defend all damage suits against the Medical Association of Georgia; to investigate all claims of civil malpractice made against its members; to take full charge of such cases, which after investigation, they decide to be proper cases for defense; to defend all such cases to the courts of last resort and pay all costs of such defense. However, they shall not pay, or obligate the Medical Association of Georgia to pay any judgment rendered against any member upon the final determination of any case. They shall be empowered to contract with such agents or attorneys as they may deem necessary for the proper carrying out of this By-Law.

The assistance for defense, as herein provided, shall be available only to members of the Medical Association of Georgia in good standing. Any member who has not paid his annual dues by April 1st shall not be considered in good standing in the application of this By-Law.

Any member or members of the Association threatened with suit for civil malpractice shall immediately communicate with the Secretary of the Association and shall give full and complete information in reference to all the circumstances alleged in the complaint. The Secretary shall proceed immediately to investigate the circumstances reported and shall ad-

vise with the attorneys or agents employed by the Committee for this purpose. The member sued, or threatened with suit, shall be consulted and shall have the complete confidence of the Committee in all transactions connected with the investigation in question. The Committee shall have the authority to require of a constituent society, or the president thereof, the appointment of a committee of investigation in any such case, and it may direct the committee so appointed to report to the Committee on Medical Defense and not to the society from which it was appointed.

The Committee on Medical Defense may also, at its discretion, arrange to prosecute illegal practitioners in the State of Georgia and assist in the enforcement of the Medical Practice Act of this State.

CHAPTER VII.—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Association, or those which may hereafter be organized in the State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall on application, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charter shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Association. The Association shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one competent medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association, every reputable and legally registered white physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. No matter what the unethical conduct or discipline of the members of the county society may be, both plaintiff and defendant shall have the right to appeal to the Council whose decision shall be final when ratified by the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in this State, his name, on request, shall be transferred, without cost, to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members, or fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association at least ten days before the annual session.

Sec. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Association each year, thirty days before the annual session.

Sec. 14. Any county society which fails to pay its assessment, or make the report required, on or before April 1 of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association, or of the House of Delegates, until such requirement has been met.

Sec. 15. The Secretary of each county society shall report to the Journal of the Medical Association of Georgia full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

CHAPTER VIII.—RULES AND ETHICS

Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 2. All papers read before the Association shall

(Continued on Page 179)

District and County Societies

DISTRICT OFFICERS

First District

President ..... Myers, William H., Savannah
1st Vice-Pres. ..... Elarbee, Geo. W., Daisy
2nd Vice-Pres. ..... Ezell, Howard E., Oliver
Sec'y-Treas. ..... Long, Wm. V., Savannah

Second District

President ..... Chason, Thomas, Donalsonville
Vice-Pres. ..... Sanchez, S. E., Barwick
Sec'y-Treas. ..... Watt, Chas. H., Thomasville

Third District

President ..... Lunsford, G. G., Cordele
Vice-Pres. ..... Ware, R. M., Fitzgerald
Sec'y-Treas. ..... Greer, Chas. A., Oglethorpe

Fourth District

President ..... Clark, W. H., LaGrange
Sec'y-Treas. ..... Callaway, Enoch, LaGrange

Fifth District

President ..... Fort, A. G., Atlanta
Vice-Pres. ..... Camp, R. T., Fairburn
Sec'y-Treas. ..... Evans, J. R., Decatur

Sixth District

President ..... Miller, G. T., Macon
Vice-Pres. ..... Hunt, K. S., Griffin
Sec'y-Treas. ..... Thompson, O. R., Macon

Seventh District

President ..... Wood, Chas. V., Cedartown
Vice-Pres. ..... Alsobrook, J. S., Rossville
Sec'y-Treas. ..... Mull, J. H., Rome

Eighth District

President ..... Carter, D. M., Madison
Vice-Pres. ..... Gholston, W. D., Danielsville
Sec'y-Treas. ..... Gerdine, Linton, Athens

Ninth District

President ..... Coker, Grady N., Canton
Vice-Pres. ..... Neal, L. G., Cleveland
Sec'y-Treas. ..... Bennett, J. C., Jefferson

Tenth District

President ..... Cranston, W. J., Augusta
Vice-Pres. ..... McGahee, R. C., Warrenton
Sec'y-Treas. ..... Phinizy, Irvine, Augusta

Eleventh District

President ..... McMichael, J. R., Quitman
Vice-Pres. ..... Fleming, Albert, Folkston
Sec'y-Treas. ..... Reavis, W. F., Waycross

Twelfth District

President ..... Franklin, R. C., Swainsboro
Vice-Pres. ..... Edmondson, J. W., Dublin
Sec'y-Treas. ..... Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.
2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richmond, November 12, 1928.
3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.
4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.
5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.
6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.
7. Jasper County, Dr. E. M. Lancaster, Shady Dale, January 19, 1929.
8. Ben Hill County, Dr. L. S. Osborne, Fitzgerald, January 21, 1929.
9. Taylor County, Dr. J. C. Hind, Reynolds, January 29, 1929.
10. Monroe County, Dr. J. O. Elrod, Forsyth, February 6, 1929.
11. Barrow County, Dr. W. L. Matthews, Winder, February 7, 1929.
12. Dooly County, Dr. F. E. Williams, Vienna, March 8, 1929.
13. Macon County, Dr. C. P. Savage, Montezuma, March 8, 1929.
14. Crisp County, Dr. J. N. Dorminy, Cordele, March 19, 1929.
15. Stephens County, Dr. C. L. Ayers, Toccoa, March 26, 1929.
16. Emanuel County, Dr. R. C. Franklin, Swainsboro, March 26, 1929.
17. Cobb County, Dr. L. L. Welch, Marietta, March 26, 1929.

NEW MEMBERS FOR 1929

Adams, Chas., Cordele.
Allen, G. O., Marietta.
Banister, C. D., Marietta.
Brooks, C. C., Roswell.
Bryant, C. H., Comer.
Duffin, Chas. E., Swainsboro.
Ezzard, Thos. M., Roswell.
Green, Wm. L., Jr., Oconee.
Harrell, J. P., Brunswick.
Heller, W. B., Toccoa.
Hicks, W. P., Marietta.
Irwin, Andrew J., Sandersville.
Jenkins, H. B., Sandersville.
Kitchens, S. B., LaFayette
Lindley, Frank P., Powder Springs.
Malone, J. D., Marietta.
Maloy, J. W., Rhine.
Middlebrooks, J. D., Powder Springs.
Power, I. C., Marietta.
Puckett, W. M., Thomaston.
Rountree, A. M., Thomaston.
Shellhouse, L. H., Willacoochee.
Smith, W. T., Tifton.
Statham, J. C., Milledgeville.

COUNTIES REPORTING FOR 1929

HALL COUNTY MEDICAL SOCIETY

Hall County Medical Society announces the following officers for 1929:

President—C. J. Wellborn, Gainesville.
Vice-President—H. S. Titshaw, Gainesville.
Secretary-Treasurer—Pratt Cheek, Gainesville.
Delegate—L. G. Neal, Cleveland.
Censors—C. D. Whelchel, J. B. Rudolph and J. D. Mauldin.

BURKE COUNTY MEDICAL SOCIETY

Burke County Medical Society announces the following officers for 1929:

President—W. H. Sutton, Midville.
Vice-President—J. B. Lewis, Waynesboro.
Secretary-Treasurer—W. Harry Sutton, Midville.
Delegate—Robert L. Miller, Waynesboro.
Censors—R. L. Miller, W. C. McCarver and J. M. Byne.

WARREN COUNTY MEDICAL SOCIETY

Warren County Medical Society announces the following officers for 1929:

President—F. L. Ware, Warrenton.
Vice-President—F. B. Ricketson, Warrenton.
Secretary-Treasurer—Robert C. McGahee, Warrenton.
Delegate—A. W. Davis, Warrenton.

FLOYD COUNTY MEDICAL SOCIETY

Floyd County Medical Society announces the following officers for 1929:

President—A. H. Dellinger, Rome.
Vice-President—J. H. Mull, Rome.
Secretary-Treasurer—C. H. McArthur, Rome.
Delegate—G. B. Smith, Rome.
Censors—W. J. Shaw, A. H. Dellinger and J. H. Mull.

DOOLY COUNTY MEDICAL SOCIETY

Dooly County Medical Society announces the following officers for 1929:

President—L. H. Bishop, Unadilla.
Vice-President—H. A. Mobley, Vienna.
Secretary-Treasurer—F. E. Williams, Vienna.
Delegate—L. H. Bishop, Unadilla.
Censors—W. N. Edenfield, J. L. Lee and E. B. Davis.

TROUP COUNTY MEDICAL SOCIETY

Troup County Medical Society announces the following officers for 1929:

President—H. McCulloh, Sr., West Point.
Vice-President—W. R. McCall, LaGrange.
Secretary-Treasurer—H. McCulloh, Jr., West Point.
Delegate—C. O. Williams, West Point.

BALDWIN COUNTY MEDICAL SOCIETY

Baldwin County Medical Society announces the following officers for 1929:

President—U. S. Bowen, Milledgeville.
Vice-President—W. F. Dobyns, Milledgeville.
Secretary-Treasurer—J. W. Mobley, Jr., Milledgeville.
Delegate—H. D. Allen, Jr., Milledgeville.
Censors—R. C. Swint, W. M. Scott and U. S. Bowen.

CRISP COUNTY MEDICAL SOCIETY

Crisp County Medical Society announces the following officers for 1929:

President—T. E. Bradley, Cordele.
Vice-President—Guy C. Lunsford, Cordele.
Secretary-Treasurer—J. N. Dorminy, Cordele.
Delegate—T. J. McArthur, Cordele.
Censors—M. R. Smith, V. O. Harvard and W. A. Miller.

FULTON COUNTY MEDICAL SOCIETY

Fulton County Medical Society announces the following officers for 1929:

President—Charles E. Waits, Atlanta.
Vice-President—M. T. Harrison, Atlanta.
Secretary-Treasurer—Howard Hailey, Atlanta.
Censors—Hal C. Miller, L. G. Kelley and J. B. Fitts.

GLYNN COUNTY MEDICAL SOCIETY

Glynn County Medical Society announces the following officers for 1929:

President—H. L. Akridge, Brunswick.
Vice-President—H. M. Branham, Brunswick.
Secretary-Treasurer—F. N. Aldrich, Brunswick.

STEPHENS COUNTY MEDICAL SOCIETY

Stephens County Medical Society announces the following officers for 1929:

President—W. H. Swain, Martin.
Vice-President—J. H. Terrell, Toccoa.
Secretary-Treasurer—C. L. Ayers, Toccoa.
Delegate—E. F. Chaffin, Toccoa.
Censors—J. E. D. Isbell, W. H. Swain and W. B. Heller.

LAURENS COUNTY MEDICAL SOCIETY

Laurens County Medical Society announces the following officers for 1929:

President—A. T. Coleman, Dublin.
Vice-President—Charles A. Hodges, Dublin.
Secretary-Treasurer—O. H. Cheek, Dublin.
Delegate—Charles A. Hodges, Dublin.
Censors—D. D. Woodard, J. E. New and C. G. Moye.

JACKSON COUNTY MEDICAL SOCIETY

Jackson County Medical Society announces the following officers for 1929:

President—H. E. Crowe, Talmo.
Vice-President—F. M. Hubbard, Commerce.
Secretary-Treasurer—J. C. Bennett, Jefferson.
Censors—L. C. Allen, C. B. Lord and W. C. Kennedy.

Woman's Auxiliary
Medical Association of Georgia

OFFICERS

President ..Mrs. C. C. Hinton, Macon
Pres.-Elect ....Mrs. Marion T. Benson, Atlanta
1st Vice-Pres. ....Mrs. Wm. R. Dancy, Savannah
2nd Vice-Pres. ....Mrs. W. F. Reavis, Waycross
3rd Vice-Pres. ....Mrs. A. J. Mooney, Statesboro
Cor. Sec. ....Mrs. J. A. Selden, Macon
Rec. Sec. ....Mrs. Ralston Lattimore, Savannah
Treasurer ....Mrs. M. B. Allen, Hoschton
Parliamentarian ....Mrs.. J. Cox Wall, Eastman

Delegates to A. M. A.

Mrs. C. W. Roberts ....Atlanta
Mrs. H. M. Fullilove ....Athens

DELEGATES TO THE A. M. A.

Mrs. C. W. Roberts ....Atlanta
Mrs. Dan Y. Sage ....Atlanta
Mrs. Geo. W. Fuller ....Atlanta
Mrs. J. Cox Wall ....Eastman

INVITATION

To the Officers and Members of the Woman's Auxiliary:

We extend a cordial and urgent invitation to the members of the Woman's Auxiliary to the Medical Association of Georgia to attend the Fifth Annual Meeting of the Auxiliary to be held at Macon May 7, 8, 9, 10, 1929.

MRS. J. L. KING,
President Woman's Auxiliary to the Bibb County Medical Society.

MRS. JOHN A. SELDEN,
Chairman, Entertainment Committee.

WOMAN'S AUXILIARY

Fifth Annual Convention

The fifth annual convention of the Woman's Auxiliary to the Medical Association of Georgia will be held at Macon, May 7, 8, 9, 10, 1929. All members of the Auxiliary are invited to attend. Each local Auxiliary is entitled to two voting delegates at the business sessions on Wednesday, May 8th, and Thursday, May 9th.

MRS. J. A. SELDEN,
Secretary.

PROGRAM

May 7, Tuesday Evening

The Woman's Auxiliary to the Bibb County Medical Society will be at home to all members of the Bibb County Medical Society, their visiting friends and wives.

Wednesday, May 8, 10:30 A. M.

Introductory meeting.

Greetings, by Mrs. J. L. King, President, Woman's Auxiliary to the Bibb County Medical Society.

Welcome by Mrs. Walter D. Lamar, Macon.

Response.

Special Music.

Greetings from the Medical Association of Georgia by Dr. C. K. Sharp, President.

Introduction of Honor Guests.

Address by Mrs. Morris Fishbien, Chicago.

Wednesday, May 8, 12 Noon

Hotel Dempsey: Breakfast in honor of the State and National officers of the Woman's Auxiliary. All doctor's wives are invited to be the guests of the Bibb County Woman's Auxiliary.

2 P. M.

Hotel Dempsey: Meeting of the Executive Committee and Delegates.

Report of Committee on Credentials.

Report of Program Committee.

Reports of District Managers.

Appointment of Sessions Committee.

Calendar Resolutions.

6 P. M.

"The Oaks": Tea in honor of Mrs. Allen H. Bunce, President, Woman's Auxiliary to the American Medical Association.

8 P. M.

Municipal Auditorium: Public meeting.

Thursday, May 9, 10:30 A. M.

Hotel Dempsey: General meeting.

Invocation.

Report of State President.

Address by Dr. Morris Fishbein, Editor, The Journal of the American Medical Association.

Special Music.

Parent-Teacher Association and the Woman's Auxiliary to the Medical Association of Georgia to Cooperate to Promote Better Health by Mrs. P. H. Jeter, Decatur.

Address by Mrs. Allen H. Bunce, president of the Woman's Auxiliary to the American Medical Association.

Order of business.

Greetings by Dr. William R. Dancy, president-elect, Medical Association of Georgia.

To the Editor:

I am writing this letter to you, as Secretary of the Medical Association of Georgia, to let you know that our National Body, the Woman's Auxiliary to the American Medical Association, is ever mindful of the growth and development of the Woman's Auxiliary in your State.

Permit me to extend congratulations to you because the Woman's Auxiliary to your State Medical Association is organized and active. You will be interested to know that thirty states and the District of Columbia are already organized with a membership of about ten thousand at the last report.

We aim at 100 per cent membership for the wives of members of the American Medical Association. Will you not actively encourage the Chairman of Organization in your State in her attempt to secure 100 per cent membership, by helping her to strengthen the State Auxiliary and to develop new County or City Auxiliaries as conditions may indicate?

Your wise, helpful, experienced suggestions will be most welcome, I assure you, and gratefully appreciated.

MRS. JANE TEAR McCORMACK,
Chairman of Organization, Woman's Auxiliary, A. M. A.
Louisville, Ky., March 14, 1929.

CONSTITUTION AND BY-LAWS

(Continued from Page 175)

become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

Sec. 3. The principles of medical ethics of the American Medical Association shall be those of this Association.

Sec. 4. Any member of this Association, on locating in a new place for practicing his profession may place his professional card, containing name, address, telephone number, and statement as to whether or not his practice will be limited to any particular class of disease, in the local paper for a period of not longer than one month. The placing of such card for this period of time shall not be considered unethical. The use of the word "specialist" by any member in connection with his name in any newspaper, telephone directory, or other public places, shall be considered unethical."

CHAPTER IX.—AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the Association after the amendment has lain on the table for one day.

RESOLUTIONS, MEDICAL ASSOCIATION OF GEORGIA

1921

Resolved, That a member who sends in a title of a paper to be placed on the program and is not present to read the paper, shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

1922

Be it Resolved, That the House of Delegates recommend that the Committee on Scientific Work make available on the program of the State Association space for two papers from each Councilor district; that a definite time be assigned for reading and discussion of each of these papers, and they be given precedence over all other business. The said papers are to be selected by the Committee on Scientific Work, and, in case a writer does not respond when his name is called, some paper will be substituted and the schedule not deranged. The President ruled that this resolution is only a recommendation and not a law.

1923

Resolved, That the Committee on Health and Public Instruction shall consist of three members and the President and Secretary. The three members, one of whom shall act as Chairman of the Committee, shall be appointed for a period of three years. Those appointed this year (1923) shall serve three and two years and one year, respectively.

1928

Resolved, That the delegates to the A. M. A. elected at this and succeeding meetings of the Medical Association of Georgia take office January 1st, following their election, and that their term of service run for two years thereafter. And be it further

Resolved, That our delegates be authorized to attend the regular and any called meeting of the House of Delegates of the American Medical Association during the term to which they are elected.

SOUTHEASTERN SANITARIUM

Southeastern Sanitarium, Atlanta, is advertised in the front of this issue of the Journal. It was formerly operated as Blackman Sanitarium, a general medical and hydrotherapeutic institution favorably known over the South for twenty years.

BOOK REVIEWS AND ABSTRACTS

Mark S. Dougherty, M. D.
Department Editor

BOOK REVIEWS

Treatment of Diabetes Mellitus, by Elliott P. Joslin. M.D., Lea and Febiger, Publishers, Philadelphia, 1928; pages, 998; tables, 342. Price, $9.00.

Dr. Joslin, in this book, presents the story of diabetes beginning with the story of the Hedon dog of Montpellier, France, and weaving into a monumental book all the pertinent knowledge concerning this malady. The book begins with a graphic description of the diabetes of today with the prolongation of life of diabetic children and the replacement of coma by arteriosclerosis as the first cause of death.

Section II deals with insulin and its use in the treatment of diabetes. Questions such as who should take insulin, dosage, frequency and methods of administration, insulin in the home and hyperinsulinism are discussed in a practical way.

Sections III, IV and V deal with the advances made in the past decade in the chemistry, physiology and pathology of diabetes. In Section VI the advanced ideas of diet in relation to diabetes are discussed. The responsibility for the management of the diet should be placed in the hands of one person.

Section VIII is devoted to a discussion of the treatment of diabetes. At the beginning these patients should be made to realize that the treatment of this condition lasts throughout life. Detailed instruction and painstaking education of these patients is an essential part of the treatment. From his years of experience in treating diabetes Dr. Joslin has evolved a diabetic creed. This creed is as follows:

1. That diabetes mellitus should be considered so probable in any person who has 0.1 per cent or more of sugar in the urine that he should be watched for life.

2. That normal weight or less should be insisted upon in each diabetic, suspected diabetic, or relative of a diabetic, but that therapeutic loss of weight should be extremely gradual.

3. That mildness of the diabetes should be assumed, a long life be expected, and the patient be treated accordingly. Hence, the nearer the proportions of carbohydrate, protein, and fat in the diabetic diet conform to those of the normal diet, always seeking to avoid glycosuria and hyperglycemia, the better it will be for the patient, even at the sacrifice of weight, though not of strength. A carbohydrate tolerance, unutilized, retrogrades.

4. That reversal of the diet, namely high-fat and low-carbohydrate, assumes the contrary, severity of the diabetes, and is dangerous both in principle and in practice and unless accompanied by a minimum protein intake frequently ends in coma.

5. That undernutrition (a) prevents diabetes and (b) is the foundation-stone of diabetic treatment, but if hunger can be avoided a smaller number of patients will yield to temptation, break treatment, and in consequence die of coma.

6. That extreme inanition with loss of body protein is not worth while simply to render the blood sugar normal.

7. That diabetes of itself is not fatal, but that death ensues from other diseases or complications; that coma is an accident usually inexcusable and is more easily prevented in 99 cases than treated in 1, and, therefore, diabetics when ill from any cause should (1) go to bed; (2) keep warm; (3) take a glass of hot water, tea, broth, orange juice or oat meal water gruel every hour; (4) empty the bowels with an enema; (5) call a doctor, who, if he finds acidosis the dominant factor, will give insulin and caffeine, may wash out the stomach and inject subcutaneously a solution of salt. A diabetic under treatment with insulin should not omit it unless sugar-free and under medical supervision.

8. That the diabetic should be regarded as unusually susceptible to arteriosclerosis and should be treated with this in view. The carbohydrate in the diet should not long remain under 100 grams and foods high in cholesterol should be restricted. Gangrene and the complications therefrom can usually be avoided by treatment with posture and by washing the feet daily and by reporting the discovery of any lesion to the physician.

9. That any patient with a tolerance of less than 100 grams of carbohydrate should (a) test his own urine for sugar; (b) keep sugar free, and (c) take home food scales and use them until he can keep sugar-free without them.

10. That the immediate aim of practice should be to simplify treatment and to encourage physicians to develop in their own communities, homes and clinics to which they may refer their patients for a diabetic education in case their own time and facilities are inadequate.

11. That firm persistence in a strict diabetic diet (a) finds ample justification in the patients kept alive by it to profit by insulin, and (b) is essential to safety and success in the use of insulin. Insulin utilizes rather than replaces the advances in diabetic treatment hitherto achieved.

The continued welfare of these patients necessitates the use of a follow-up system. Dr. Joslin requests his patients to either see him or send him a brief report of their condition once each month.

The value of synthalin and neosynthalin in the treatment is discussed. These drugs materially reduce

the sugar in the blood and urine and increase the tolerance for an additional 40 or 45 grams of carbohydrate. Aside from temporary digestic disturbances no harm has resulted from their use. The administration of this drug has enabled some patients to reduce their insulin dosage materially and some patients have been enabled to omit insulin entirely. The use of myrtillin is not so well defined. Some elderly patients with mild diabetes seem to do well on it, however its use is limited. Exercise as a therapeutic measure is emphasized.

The treatment of acidosis and coma is discussed in Section IX. Insulin of course is the chief weapon in this fight. Accessory measures including warmth, liquids, gastric lavage, circulatory stimulants, alkalis and diet are referred to.

The section devoted to the discussion of diabetes in childhood is one of the finest parts of the book. This section is based upon the treatment of three hundred ninety-five cases of true diabetes.

This book represents the painstaking accumulation and transcription of an enormous number of clinical facts. The individual cases cited number eight hundred ninety-five. The simple directness and beauty of the style in which it is written places it at once among the classics of medicine. The reader is stimulated to further investigation by the excellent bibliography. The index is so arranged that one can refer at once to any topic on which information is desired. This is one of the fine achievements of the book.

Dr. Joslin's achievement in advancing the knowledge pertaining to diabetes gives fine example of devotion to the ideals of our profession.

I wrote Dr. Joslin asking him how he became interested in diabetes. He very kindly wrote me the following letter:

—M. S. D.

To the Editor:

My interest in diabetes arose because I was brought up in a little country town and I remember seeing several individuals there who had the trouble. When I went to Yale College I came under the magnetic teaching of Professor Russell H. Chittenden, and he gave me the start and I worked for a year at Yale after graduating from the Academic Department, doing a little research with him and the late Dr. Frank S. Meara upon the ferments in pineapples.

At Harvard my third year case was a diabetic, Mary Higgins, and I studied her with great interest and utilized some of the chemical knowledge which Professor Chittenden had given me—knowledge which at that time was somewhat new.

At the Massachusetts General Hospital later I was impressed with the inaccuracies of diet and also appalled by patients entering and dying a few days later of coma. My whole nature revolted at the idea of giving drugs to diabetics because I saw that it was really sham treatment, and naturally I had had an antipathy to shams and frauds of all kinds, perhaps because my ancestor a couple of centuries ago was hanged on the gallows at Salem for a witch and his wife escaped a similar fate through a decree of the Crown of England, because she happened to be pregnant, though I confess I never knew whether it was that special child which England saved that was my progenitor.

Finally a patient in whose case I was absorbed in the beginning of this century, lead me to go to see Professor Naunyn in Strassbourg for a week, and that was the final stimulus which kept me on my way.

ELLIOTT P. JOSLIN, M.D.

81 Bay State Road, Boston, Mass., November 27, 1928.

Gynecology, Howard A. Kelly, A.B., M.D., LL.D. and Collaborators. Pages 1043. Plates, 14. Illustrations, 767. Publishers, D. Appleton & Company, New York, 1928.

This wonderful book by a master of Gynecology is dedicated to, "All members of the profession who take the torch to bear it onward to that perfect day when suffering and sorrow will have fled." It contains 49 chapters, 18 of which are written by Dr. Kelly. The remaining chapters are written by 20 different authors, each in his special field. The chapters are exceedingly well arranged in a systematic, anatomical order so that one reading the book from the beginning may understand the trend of the instruction.

The subject matter is well up to date as there are eight chapters on rather recently developed medical and gynecological subjects, namely: Endocrinology and Organotherapy by Dr. Emil Novak, Peruterine Tubal Insufflation in Sterility, by Dr. Isidor C. Rubin; Sacral Anaethesia, by Dr. W. W. Scott; Endometriomata, by Dr. Robert M. Lewis; Protein Therapy, by Dr. George Gellhorn; Radium, by Dr. Curtis F. Burnam; Ultraviolet Radiation, by Dr. Robert E. Fricke. The last chapter, "Some Topics of Common Ground Between Gynecology and Psychopathology," by Dr. Esther Loring Richards, will probably be considered one of the most needed and important chapters by many readers.

Many of the superb plates and illustrations are done by Max Broedel, that incomparable interpreter of medicine in art. Numerous excellent illustrations are also done by August Horn, Hermann Becker and E. M. Freret.

This great piece of work is most difficult to evaluate but I should say that it is equally valuable as a text or as a reference book.

Every gynecologist, internist, general practitioner and medical student should own this book.

EVERT A. BANCKER, JR., M.D.

Syphilis, Charles C. Dennie; $2.50. Harper's Medical Monographs. Harper & Brothers, Publishers.

An excellent brief compilation or resume of data which should be known about syphilis by every prac-

titioner of medicine. The matter is presented in a clear concise manner, often in an almost diagramatic form, which gives an excellent general conception of the subject.

This book should be especially valuable for the use of students in helping them to obtain a general grasp and properly balanced conception of syphilis, its pathology, diagnosis, clinical manifestations and treatment. The book is attractively made, of small size and well finished—a nice coat-pocket test.

J. C. MASSEE, M.D.

BOOKS RECEIVED

An Index of Symptomatology By Various Writers. Edited by H. Letherby Tidy, M.A., M.D., Oxon, London, Assistant Physician, St. Thomas' Hospital; Consulting Physician, Royal Northern Hospital. It is hoped that the descriptions are such as may enable a typical or fairly typical case to be recognized by a practitioner unfamiliar with or in doubt about the condition concerned. It is trusted that a student can obtain from its pages a portrait of a disease which will remain imprinted upon his memory. The work covers all branches of medicine, surgery, gynecology, and the various special subjects. Contains 710 pages with 131 illustrations, some in colors. Publishers: William Wood & Company, 156 Fifth Avenue, New York City. Price, $12.00.

Proctology, a Treatise On the Malformations, Injuries and Diseases of the Rectum, Anus and Pelvic Colon, by Frank C. Yeomans, A.B., M.D., F.A.C.S., Professor of Proctology, New York Polyclinic Medical School; Fellow and Past-President, American Proctologic Society; Attending Surgeon, New York Polyclinic Hospital, and New York City Cancer Institute; Proctologist, the New York Hospital. Contains 661 pages with 417 illustrations and four colored plates. Publishers: D. Appleton and Company, 35 West Thirty-second Street, New York City.

A Text Book of Clinical Neurology For Students and Practitioners, by M. Neustaedter, M.D., Ph.D., Visiting Neurologist, Central Neurological Hospital, Welfare Island; Formerly Lecturer in Neurology, University and Bellevue Hospital Medical College; Clinical Professor in Neurology, New York Polyclinic Medical School and Hospital; Attending Neurologist, Bellevue Hospital, Outpatient Department, Stuyvesant Polyclinic, St. Mark's Hospital; Neurologist, Kings County and City Hospital, Welfare Island, New York. Introduction by Edward D. Fisher, M.D., Professor Emeritus of Neurology, University and Bellevue Hospital Medical College, New York City. Contains 602 pages with 228 illustrations, some in colors. Publishers: F. A. Davis Company, 1914 Cherry Street, Philadelphia. Price, $6.00.

COMMUNICATIONS

PACKAGE LIBRARY SERVICE

To the Editor:

In connection with our Package Library Service, you may be interested to know that we recently received a request for information from a doctor in Melbourne, Australia. We have always expected to make our package library useful to the profession, but we had not anticipated quite such a world-wide service!

MYRTLE TYE, Librarian.

Emory University, Ga., March 4, 1929.

AMENDED NARCOTIC LAW

To Taxpayers Under the Harrison Narcotic Law, As Amended:

Your attention is respectfully directed to the following departmental ruling:

"In view of the provisions of Article 39, 72 and 73 of Narcotic Regulations No. 5, any person registered under the Harrison Narcotic Law who removes his business from the place specified in his last application on form 678 or 678-A, and stated in his special tax stamp, to another address or discontinues a class of business indicated on unused official order forms for opium, etc., in his possession or under his control, should forward, within the calendar month in which such transfer or discontinuance occurs to the Collector of Internal Revenue of his district for cancellation of all such unused official orders forms for opium, etc., as merchandise requested on an order form may be sent only to the person designated by the Collector and at the location specified by him on the order. An order carrying any alteration or change of any description may not be filled."

J. T. ROSE, Collector.

Atlanta, Ga., March 4, 1929.

To the Editor:

In addition to the articles enumerated in our letter of February 23, the following have been accepted:

Haley M-O Co.
- Magnesia-Mineral Oil (25) Haley.

H. K. Mulford Co.
- Perfringens Antitoxin-Mulford.

National Drug Co.
- Diphtheria Toxin-Antitoxin Mixture.

Parke, Davis & Co.
- Tetanus-Perfringens Antitoxin, Refined and Concentrated.

G. D. Searle & Co.
- Solution Bismuth Sodium Tartrate-Searle, 1.5 per cent.
- Sulpharsphenamine-Searle.
- Sulpharsphenamine-Searle, 0.4 Gm. Ampules.
- Sulpharsphenamine-Searle, 0.5 Gm. Ampules.
- Sulpharsphenamine-Searle, 0.6 Gm. Ampules.

COUNCIL ON PHARMACY AND CHEMISTRY, AMERICAN MEDICAL ASSOCIATION.

Chicago, March 30, 1929.

PEDIGREE DAIRIES

Mr. J. H. Tilley, President of the Pedigree Dairies of this city, has just announced that his company is merging with the United States Dairy Products Corporation, one of the largest companies of its kind in the country. Pedigree Dairies, whose modern, sanitary pasteurizing plant is located at 165 Haynes Street, S. W., is the largest distributor of pasteurized Grade "A" milk, cream and other dairy products in Atlanta. Mr. Tilley, who has so successfully operated this property in the past, continues as President and is in full charge of operations, assisted by the present operating personnel. This group of men have successfully built up this property until today it is one of the most modern equipped and up-to-date milk plants in the South.

Mr. Tilley states that dairy farming in the South is rapidly developing to the major position it has attained in the North and West, and that the growing popularity for clean perfectly pasteurized milk, cream and kindred dairy products is resulting in a demand which will absorb this larger supply. It has been the policy of the Pedigree Dairies to develop their operations to meet the growing demand, and Mr. Tilley feels that the merging of his company with the United States Dairy Products Corporation will materially assist in the development of this area.

NEWS ITEMS

Training in Clinical Chemistry for technicians will be given in the Department of Biochemistry at Emory University School of Medicine, Emory University, from June 11th to August 23rd. For further information, address: Department of Biochemistry, Emory University.

The Bulloch-Candler Counties Medical Society entertained the members of the First District Medical Association at a barbecue on March 15th at Statesboro. The Woman's Auxiliary met at the home of Dr. and Mrs. A. J. Mooney. The next meeting of the society will be held at Savannah in July.

Dr. L. W. VanZandt, formerly of Resaca, has removed to LaFayette.

Dr. D. W. Pritchett, formerly of Barnesville, has removed to Thomaston.

Tri Counties Medical Society met at Edison, March 20. Dr. J. C. Patterson, Cuthbert, read a paper on Local Anesthesia; Drs. C. K. Sharp, Arlington, and S. P. Holland, Blakely, gave case reports. The next meeting of the society will be held at Arlington in June. Clinics will be given by professors from the University of Georgia Medical Department, Augusta.

The first post-graduate school, sponsored by the State Board of Health and the Children's Bureau of the Department of Labor, was held at Waycross April 8 to 12. The object of the post-graduate school is to carry the very latest in the practice of obstetrics to convenient centers for the physicians. Dr. James R. McCord, Professor of Obstetrics of Emory University School of Medicine, was the teacher. The second school will be held at Cordele beginning April 13.

Dr. L. G. Parham announces the opening of his office at 601 Medical Arts Building, Atlanta.

Dr. A. M. Dimmock, Atlanta, Chairman of Medical Staff of the Atlanta Tuberculosis Association, in his annual report stated that three hundred thirty-four patients were admitted for treatment during the fiscal year. In 1927 there were twenty-three cases marked "arrested" and in 1928 there were thirty-four.

The Randolph County Medical Society met at Cuthbert, April 3. Dr. Loren Gary, Georgetown, gave a case report.

Staff meeting of the Davis-Fischer Sanatorium, Atlanta, was held on March 14. Dr. F. M. Barfield read a paper on "Some Observations and the Treatment of Inguinal Hernia"; Dr. L. W. Grove gave a case report on "Cirrhosis of the Liver."

Ninth District Medical Society met at Gainesville, March 20. Dr. Pratt Cheek, Gainesville, read a paper on "The Dangers of the Diabetic"; Dr. Edson W. Glidden, Alton, "Childhood Tuberculosis"; Dr. Edward T. Gibbs, Gainesville, "Salvarsan In Facial Paralysis"; Dr. Calhoun McDougall, Atlanta, "Mastoiditis"; Dr. Howard Hailey, Atlanta, "Skin Cancers and Ulcers"; Dr. C. L. Ayers, Councilor, made a report for the district.

The Georgia Association of Workers for the Blind, with offices in the Georgia Savings Bank Building, Atlanta, is very anxious for the General Assembly of Georgia at its next session to pass an act for the creation of a commission which will devote itself to the vocational training and employment of the adult blind and the rehabilitation of those who have recently become blind. Also to promote the welfare of the blind as well as to the prevention of blindness.

Dr. Everard A. Wilcox announces the removal of his office to the Southern Finance Building, Augusta. Practice limited to surgery.

Dr. Charles A. Wilkins announces the removal of his office from the Hurt Building to the Medical Arts Building, Atlanta.

The Council on Pharmacy and Chemistry of the American Medical Association in its recent announcement of new drugs accepted include the following: E. Bilhuber, Inc., Lenigallol; Ciba Co., Inc., Dial Ciba; Tablets Dial Ciba, 0.1 Gm. (1 1-2 grains); Elixir Dial Ciba.

Dr. H. D. Allen, Milledgeville, with Dr. H. B. Stewart, Fountain Inn, S. C., attended a class reunion at the Henry Grady Hotel, Atlanta, on March 4. They

graduated with a class of 50 in 1879 from the Atlanta School of Medicine. Only two other members of the class are living: Dr. J. L. Walker, Waycross, and Dr. C. T. Stovall, Vienna.

Dr. and Mrs. R. C. Montgomery, Butler, entertained the members of the Taylor County Medical Society on February 28.

Whitfield County Medical Society secured the services of a physician, nurse and an oculist to examine every child of school age in Whitfield county.

Johnson County Medical Society met at Wrightsville on March 26. Officers were elected and installed for the year.

Dr. K. F. Maxcy, U.S.P.H.S., delivered an address on Brill's disease before the meeting of the Georgia Medical Society, Savannah, on March 26.

Dr. J. A. Redfearn and Dr. Hugo Robinson, both of Albany, have been notified by Dr. L. L. Williams, Assistant Surgeon General of the U.S.P.H.S., of their election to the National Malaria Committee.

Dr. G. O. Allen, Marietta, after taking a post graduate course in internal medicine and pediatrics, has just returned from New York City and opened offices to resume the practice of medicine.

The Physicians and Surgeons Institute of Chicago, announces that a $6,000,000.00 "Diagnostic Center" will be built and equipped at Maple and LaSalle Streets. The institution will confine its activities to scientific diagnoses and health examinations. It is claimed that it will be the first institution of its kind in the world.

Dr. J. H. Mull, Rome, is in New Orleans taking a post graduate course in internal medicine.

Dr. George E. Atwood, Waycross, Commissioner of Health for Ware County, held clinics in a number of places in the county from March 27 to April 3, inclusive.

Dr. J. F. Crane, formerly of Newnan, and a graduate of Emory University School of Medicine, has opened an office at Rome for the practice of medicine. He spent two years at the Mayo Clinic, Rochester, Minnesota, taking post graduate work.

Dr. R. R. Daly, Atlanta, delivered an address before the Social Health Worker's Club at the Winecoff Hotel on March 18.

Drs. J. K. Burns, L. R. Bryson, C. J. Wellborn and C. D. Whelchel, all of Gainesville, gave free examinations to boys making application to the Citizens Military Training Camps.

Dr. T. Lowry, Cartersville, has returned from Tulane University of Louisiana School of Medicine, where he spent six weeks taking a post graduate course.

Dr. J. G. Dean, Dawson, and Dr. C. L. Ridley, Macon, were appointed by Governor L. G. Hardman, members of the State Board of Health for a term of six years. Dr. C. F. Griffith, Griffin, was appointed to the State Board of Medical Examiners to fill the unexpired term of Dr. J. M. Anderson, Barnesville, deceased.

The Fifth District Medical Society met at the Academy of Medicine, Atlanta, March 13. The Scientific program consisted of a symposium on influenza.

The Coffee County Medical Society met at Douglas on March 6.

Dr. M. J. Epting, Savannah, read a paper on Spinal Anesthesia before the Georgia Medical Society on March 12th.

The Richmond County Board of Education appropriated $2,700.00 to defray the expenses of physicians and nurses for work in the public schools of Augusta and Richmond County.

Dr. Dunbar Roy, Atlanta, presented the Fulton County Medical Society with 36 steel engraved photographs of famous physicians and surgeons at its monthly meeting in March. Dr. Mark S. Dougherty gave a case report on Diabetes; Dr. O. O. Fanning discussed Influenza and Its Complications; Dr. R. A. Bartholomew read a paper on Placenta Separation.

Dr. and Mrs. C. B. Meadows, Valdosta, entertained the members of the Lowndes County Medical Society at their home on March 1.

Dr. C. E. Suggs, Barnesville, has been elected health officer for Lamar County.

Dr. Frank K. Boland, Atlanta, in an address before the Lions Club at the Henry Grady Hotel on March 12, stated that the medical profession had made more progress in the last fifty years than ever before in its history, due to two discoveries which were made by Dr. Crawford W. Long and Lord Lister of anesthesia and antiseptic surgery, respectively.

The Ware County Medical Society entertained the members of the Eleventh District Medical Society at dinner on April 11th at Hotel Ware, Waycross. Dr. James R. McCord, Atlanta, delivered an address on Obstetrics.

The Eleventh District Medical Society met at Homerville on April 9.

The Brunswick City Hospital, Brunswick, announces the opening of a ward to treat patients with tuberculosis. Dr. H. L. Akridge, Commissioner of Health for Glynn County, is given much credit for his untiring efforts to secure the added ward.

Dr. T. F. Abercrombie, Commissioner of Health, announces that Dr. H. T. Coggeshall, from the University of Illinois College of Medicine, Chicago, has been retained by the State Board of Health to direct a fight against malaria in this state.

OBITUARY

Dr. Hinton J. Baker, member, Augusta; University of Georgia, Medical Department, Augusta, 1907; age, 47; died at his home on December 28, 1928, of pneumonia. He received his education at the Richmond Academy, Augusta, and the University of Georgia, Athens. Dr. Baker was Associate Professor of Pediatrics of the University of Georgia Medical Department and Medical Supervisor of the public schools of the City of Augusta. He was one of the first of his community to be commissioned in the medical reserve corps during the World War. Dr. Baker attended Fort Oglethorpe Officers Training Camp and served as battalion surgeon for the 320 Infantry, eightieth division. Acquaintances held him in high esteem and the medical profession recognized his ability as a physician and teacher. Dr. Baker was a member of the Presbyterian Church.

Dr. Pierce Edwin Griffin, member, Edison; Atlanta College of Physicians and Surgeons, 1901; age, 52; died March 23, 1928. He was one of the leading physicians of his community and one of its best citizens. Surviving him are his widow, two brothers, H. V. Griffin, Albany, and F. P. Griffin, Birmingham; two sisters, Mrs. G. W. Hammond, Albany, and Mrs. W. A. Branan, Waynesboro. Funeral services were conducted by Rev. L. E. Brady from the Edison Methodist Church and interment in the Leary Cemetery.

Dr. John Howard Bullard, member, Machen; Emory University School of Medicine 1875; age, 80; died March 4, 1929. He was surgeon for the Central of Georgia Railway for 30 years. Dr. Bullard was a direct descendant of John Howard Payne, composer of "Home Sweet Home." Surviving him are his widow, three sons, L. S. Bullard, Columbia, S. C.; W. H. and F. L. Bullard, of Machen; one daughter, Mrs. Percy Ezell. Funeral services were conducted by Dr. Elam Dempsey, Presiding Elder of the Oxford District, and interment in the family burial lot at Machen.

Dr. Vega Berry, Bainbridge; Kentucky School of Medicine, Louisville, 1869; age, 81; died February 28, 1929, from injuries received by being run down by an automobile. He had practiced medicine in Bainbridge and vicinity for fifty years. Dr. Berry was a member of the First Methodist Church and had served as trustee for the church since 1889. He was a useful citizen and had many friends.

Dr. H. Burns Lee, Buford; age, 42; died at his home in the Southern part of Gwinnett County on March 11, 1929. He was a native of Gwinnett County and had practiced medicine for eighteen years. Surviving him are his widow and two children. Funeral services were conducted by Rev. C. P. Ewing and Rev. Walker Davis from the Yellow River Church, and interment in the church yard.

Dr. Archibald Elkin, member, Atlanta; Atlanta College of Physicians and Surgeons, 1910; age, 45; died March 29, 1929, at a hospital in Atlanta of septicemia. He was a native of Stanford, Kentucky, and founder of the Good Samaritan clinic. Dr. Elkin was educated at Stanford and Transylvania College, Lexington, Ky. After graduating in medicine, he devoted the greater part of his work to pulmonary diseases and about ten years ago began the study of the endocrine and eventually limited his practice almost entirely to this work. Dr. Elkin was a member and past master of the Palestine Lodge No. 486, F. & A. M., member of the Shrine and Scottish Rite Masonic lodge. Surviving him are his daughter, Miss Mary Catherine Elkin, Atlanta; one sister, Mrs. Edwin P. Moritz, Scarsdale, New York; mother and father.

Dr. Wiley H. Quillian, member, Thomaston; Georgia College Electic Medicine and Surgery, Atlanta, 1902; age, 51; died at his home March 16, 1929. He was born in Cairo. Dr. and Mrs. Quillian recently moved from Lula, Hall County. Surviving him are two sons, William Houston Quillian, Dahlonega; Rufus C. Quillian, Thomaston. Funeral services were conducted by Rev. J. T. Robins and Rev. C. S. Durden at the graveside in Glenwood cemetery.

Dr. Olin E. Shankle, member, Commerce; Atlanta College of Physicians and Surgeons, 1904; age, 49; died in his car at home, March 31, 1929, immediately after making a professional call. He was one of the leading physicians in his home community, had taken several post graduate courses in the leading medical schools of the country. At the time of his death he was serving as a member of the city council of Commerce, director of the First National Bank of Commerce, president of the Commerce Building and Loan Association, colonel on the staff of Governor L. G. Hardman, member of the American Medical Association and the First Methodist Church. Surviving him are his widow, two sisters, Mrs. L. J. Sharp, Commerce; Mrs. N. W. Perkins, Atlanta; four brothers. Rev. Grogan Shankle, Augusta; L. P. and A. M. Shankle, Commerce; and Claude Shankle, Atlanta. Funeral services were conducted from the First Methodist Church by Rev. H. L. Edmondson and Rev. J. H. Allison.

Dr. Henry C. Whelchel, member, Douglas; University of Georgia Medical Department, Augusta, 1886; age, 68; died at his home on April 2, 1929. About 25 years ago he moved from Dahlonega to Douglas and practiced medicine until his recent illness. Dr. Whelchel was public spirited. He served for a number of years on the city council, member of the board of education and one of the first trustees of the Eleventh District A. & M. School. Surviving him are his widow, one daughter, Mrs. Frank Benton, Wilson, N. C.; six sons, Garnett Whelchel, Allendale, S. C.; E. V. Whelchel, Ocilla; Hugh Whelchel, Sanford, Fla.; Leon Whelchel, medical student at the

University of Georgia Medical Department, Augusta; Jack and Ward Whelchel, Douglas. Funeral services were conducted by Rev. T. B. Stanford from the residence.

PULMONARY TUBERCULOSIS

(Continued from Page 159)

cod liver oil may be prescribed, but their value is doubtful.

While relatively a few men still strongly believe in the therapeutic virtues of tuberculin in tuberculosis—and I refer to pulmonary tuberculosis—the consensus of the leading medical thought is against its use. Its death knell. I believe was sounded in this country a few years ago at the meeting of the National Tuberculosis Association in Washington. Similarly, light therapy, both natural and artificial, should be used with caution, if at all, in the pulmonary form of tuberculosis.

There are certain mechanical measures, again having as their object rest—local rest to the lung—that may be used with considerable benefit to the unilateral cases. Such measures are—an inflatable jacket, strapping of the chest, applying sand bags and compressing the diseased lung by means of artificial pneumothorax. This last measure and one that I am very interested in, is of paramount importance in the treatment of tuberculosis and is coming more and more to be employed in the earlier case—so its inclusion here may not be amiss.

In conclusion I should like to stress the vital importance of frequent, periodic examinations, particularly in those individuals with a tuberculous background, in order that an early diagnosis may be made. With an early diagnosis and the proper treatment, the outlook is decidedly favorable and in many cases, a complete cure may be anticipated.

HAMMERS AND MONKEY WRENCHES

(Continued from Page 160)

Every honest effort to deal with the economic situation involved in the care of the sick should be encouraged, and the leaders in medicine, nursing and the public should understand the needs and make a concerted effort to deal with them, rather than that any particular group, without full knowledge of the whole situation, should attempt to overthrow the benefits to the public and the profession already accrued in present legislation.

*Two states and three territories—the Philippines, Alaska and Porto Rico—would bar Georgia nurses from registration if educational standards were lowered to less than two years of high school.

**If the courses were shortened to two years, nurses of Georgia would be barred by law from practicing in twenty-two other states and territories of Hawaii and Porto Rico. In some other states they would be discriminated against by rulings of the boards of examiners.

AMERICAN MEDICAL ASSOCIATION CONVENTION, PORTLAND, ORE., JULY 7th-12th

It is a soul-satisfying experience to board the special Pullman cars reserved for this special movement as you escape the humdrum routine of a work a-day world while faring forth on the high road of adventure in the great West. Moreover, it is an experience from which may be derived maximum pleasure at a decidedly reasonable cost, thanks to the planning of travel experts who have arranged a very delightful trip to the above convention.

Consider, too, the friendships you will make among your carefree, adventurous-spirited companions of the special party. Contrast the resulting camaraderie with touring alone and the catch-as-catch-can method of making friends. And consider finally, from start to finish everything is planned in advance. No waiting for trains or studying of time tables, each detail or reservation is made in advance before you leave your home town and you know beforehand the cost of your trip.

We leave Atlanta at 6:30 P. M. via "Dixie Flyer" June 28th, and those leaving from other Southern cities may join our party in Atlanta or go direct to Chicago and there join the entire party.

We leave Chicago Saturday, June 29th, at 6:30 P. M. from Chicago Northwestern Railway Station.

Sunday, June 30th, we arrive at St. Paul. We take a sight-seeing tour of this lovely city of wide boulevards and beautiful homes, and leave from Minneapolis for Banff, internationally famed resort in the majestic Canadian Rockies. Banff bids us welcome, and how we enjoy its clear sunshine and exhilerating air, the wonderful scenery, etc. Automobiles meet us on our arrival and take us for a trip visiting fascinating points of interest: Bow Falls, Tunnel Mountain, Buffalo Park, and the Zoo, the Cave and the Basin, and the Golf Links.

The city of Portland is proud of its new Auditorium. It is a beautiful building, modern in every respect, and is conveniently arranged to take care of meetings and conventions whether they be large or small.

Seattle, the beautiful and fast growing metropolis of Puget Sound, and the gateway to Alaska and the

Portland

Oriental Limited, in the Cascades

Orient, is a delightful stop-off place for tourists en-route to Portland or California. In and near the city are many splendid drives, golf courses, parks and recreation centers.

A ride through the new eight-mile tunnel in the Cascades, the fifth longest railway tunnel in the world and the longest on the western hemisphere, furnishes added interest to a transcontinental trip over the Great Northern Railway. The tunnel, which bores straight through as a gun barrel through the granite backbone of the Cascade Range, was completed early in 1929 and dedicated as a monument to the Empire Builder, James J. Hill.

The new line of the Great Northern Railway up the scenic Chumstick valley to and through the Cascade tunnel and on to Skykomish, near the Pacific, a distance of 75 miles, is electirified. The most powerful motor-generator locomotives ever built are used to haul trains over this section of the Great Northern. As on the 1200 miles of the Great Northern line where oil-burning steam locomotives are used travel over the electrified section of the line is delightfully clean and free from smoke and cinders.

Portland, Oregon, a great seaport of the Pacific, situated on the historic and beautiful Williamette River 12 miles above its junction with the Columbia, is one of the most charming cities of the Pacific Northwest. In and near the 'Rose City" the traveler and vacationist will find splendid hotels, typical western hospitality and a varied assortment of scenic and recreational attractions.

Spokane, the largest city on the great Northern Railway between the Twin Cities and the Pacific Coast, is also a delightful stop-off place for vacation travelers. The city is the commercial capitol of the vast Inland Empire and is set down, on the madly rushing Spokane River, amidst pine-clad hills, orchard and garden tracts and many lovely lakes.

In all the world there are no more beautiful or inspiring views than those to be obtained from the verandas of Going-to-the-Sun Chalets at the western end of St. Mary Lake in Glacier National Park. Here is a gem-like lake, from the narrows at the Golden Stairs to its head, encompassed and guarded by the sheer walls, forested slopes, crags, pinnacles and domes of Red Eagle, Little Chief, Citadel, Fusilade, Goat and Whitefish mountains and, dominating all of these mighty peaks, there is the majesty of Going-to-the-Sun Mountain.

The next day we go by automobiles to Johnston Canyon, and the well known Lake Louise. We also include a motor trip for about 22 miles into the heart of the Canadian Rockies visiting beautiful Morraine Lake and the enchanting Valley of Ten Peaks.

Next we visit Vancouver, Canada's fourth largest city. Here we embark on a steamer for the daylight trip down Puget Sound, allowing a glimpse of Victoria, that "smiling bit of old England," thence on to Seattle. We board the Pullman cars here for the Convention city, arrive in Portland early in the morning July 7th, and we are just in time for the opening of the Medical Convention and it has been a glorious vacation trip in getting here.

After the Convention ends on July 12th some may wish to follow the trails of the National Parks; others may wish to visit California, etc. In order to meet the many desires, various return trips have been arranged, as follows:

Optional Return Trip No. 1 is via Gardner to Yellowstone National Park, including four and one-

half days motor transportation to Mammoth Hot Springs and over the scenic Cody Road, thence via rail enroute to Chicago and your starting point.

Optional Return Trip No. 2 is via Glacier National Park, including a three-day trip in Glacier Park, stopping at Many Glacier Hotel and Going-to-the-Sun Chalet, thence by rail to Chicago and your starting point.

Optional Return Trip No. 3 is via West Yellowstone Station, including four and one-half days trip in Yellowstone National Park, visiting Old Faithful Inn, Grand Canyon and Mammoth Hot Springs, thence by rail to Salt Lake City and visit the Mormon Tabernacle or famous Salt Air Beach—before leaving over the Royal Gorge Route for a daylight ride through Royal Gorge, allowing ten-minute stop-over in the Royal Gorge—arrive at Colorado Springs, where we arrange an auto trip over the famous Mesa Road to Manitou, Garden of the Gods, Cave of the Winds and Seven Falls—leaving via rail for Chicago and your starting point.

Entering the Great Cascade Tunnel

Optional Return Trip No. 4 is along the California Coast to San Francisco where we have arranged a thirty-mile auto trip including Golden Gate Park, etc. Next day we leave for Los Angeles, and after a trip of the city we visit Hollywood and the Famous Beaches. Next day we leave for Grand Canyon and drive over the famous Hermit Rim Road—before leaving Grand Canyon on evening train via Albuquerque to Chicago and your starting point.

Optional Return Trip No. 5 covers direct return trip.

Optional Return Trip No. 6 covers return via San Francisco to starting points, with various stop-overs.

AMERICAN MEDICAL ASSOCIATION MEETING TOURS AND COSTS

Itinerary to Portland and Six Optional Returns From Portland

June 28th—Leave Atlanta, Ga., at 6:30 P. M. "Dixie Limited."

June 29th—Arrive Chicago at 2:35 P. M., leaving via the C. & N. W. R. R., at 6:30 P. M. Party convenes at Chicago & Northwestern Station.

June 30th—Arrive St. Paul at 7:05 A. M. Auto sightseeing tour of the city. And leave Minneapolis at 11:40 A. M. via Soo Line.

July 1st—Enroute.

July 2nd—Arrive Banff, via the Canadian Pacific line at 8:05 A. M. Automobiles will meet us upon our arrival and take us for a trip, visiting Bow Falls, Tunnel Mountain, Buffalo Park and the Zoo, the Cave and the Basin, and the golf links. The afternoon will be at disposal of the tour members. Sleeping accommodations will be provided in our special Pullman car.

July 3rd—At Banff. A motor trip in the morning will take us to Johnston Canyon with a 45-minute stopover there. There will be frequent opportunities to see wild life. Automobiles will take us to Lake Louise.

July 4th—At Lake Louise. A wonderful motor drive of 22 miles into the heart of the main part of the Rockies, visiting Moraine Lake and the Valley of Ten Peaks.

July 5th—Leave Lake Louise via the Canadian Pacific at 9:55 A. M.

July 6th—Arrive Vancouver at 7:45 A. M. connecting with steamer leaving at 10:30 A. M. for daylight sail down Puget Sound. Arrive Victoria at 2:30 P. M., where automobiles will be waiting to take us for a sight-seeing trip about the city, returning us to steamer in time to sail at 4:30 P. M. Arrive at Seattle 8:30 P. M., and leave via Union Pacific Line at 11:15 P. M.

July 7th—Arrive Portland at 6:15 A. M. Room with bath at Hotel Multnomah or Imperial.

Optional Return No. 1-A.

July 12th—Leave Portland via Northern Pacific at 8:00 P. M.
July 13th—Enroute.
July 14th—Arrive Gardner at 11:15 A. M., where connection is made for auto tour consuming 4 1-2 days through Yellowstone National Park. Stopovers will be made nights at Mammoth Hot Springs, Old Faithful and Canyon Lodges. Our exit via Cody Road will be a fitting climax to this delightful tour.
July 18th—Leave Cody via the Northern Pacific at 8:30 P. M.
July 19th—Enroute.
July 20th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."
July 21st—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 2-B

July 12th—Leave Portland via S. P. & S. R. R. at 8:00 P. M.
July 13th—Arrive Glacier Park at 9:12 P M., stopping at Glacier Park Hotel. A 3-day tour of the Park, dividing our time between Many Glacier Hotel, Going-to-the-Sun Chalet and Glacier Hotel.
July 16th—Leave Glacier Park via Great Northern at 9:12 P. M.
July 17th—Enroute.
July 18th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."
July 19th—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 3-C.

July 12th—Leave Portland via Union Pacific at 4:00 P. M.
July 13th—Enroute.
July 14th—Arrive West Yellowstone at 7:30 A. M., connecting with motor coach for 4 1-2 day tour of Yellowstone National Park, stopping over nights at Old Faithful, Grand Canyon and Mammoth Hot Springs Lodges.
July 18th—Leave West Yellowstone at 7:00 P. M.
July 19th—Arrive Salt Lake City at 7:30 A. M. Automobiles will take us for trip around city and visit will be made to the Mormon Tabernacle. Luncheon will be served at the Utah Hotel. The afternoon will be at disposal of members, and leave Salt Lake City via D. & R. G. R. R. at 6:00 P. M.
July 20th—Pass through the Royal Gorge in the early afternoon. Arrive Colorado Springs at 6:20 P. M.
July 21st—Automobiles will take us for a trip to the Garden of the Gods, Cave of the Winds, and Seven Falls. Leave Colorado Springs via Rock Island Lines at 8:30 P.M.
July 22nd—Enroute.
July 23rd—Arrive Chicago at 6:59 A. M. and leave at 10:00 A. M. via "The Flamingo."
July 24th—Arrive Atlanta, Ga., at 8:40 A. M.

Optional Return No. 4-D

July 12th—Leave Portland via Southern Pacific at 9:00 P. M.
July 13th—Enroute.
July 14th—Arrive San Francisco at 7:50 A. M., stop at St. Francis Hotel.
July 15th—Leave San Francisco via Southern Pacific at 8:00 P. M.
July 16th—Arrive Los Angeles at 9:30 A. M. Room with bath at Hotel Clark. Auto tour to Hollywood and the beaches included.
July 17th—Leave Los Angeles via Santa Fe R. R. at 12:01 P. M. (Noon.)
July 18th—Arrive Grand Canyon at 8:20 A. M. Breakfast, luncheon and dinner at El Tovar Hotel. Auto drive along Hermit Rim Road. Leave Grand Canyon via Santa Fe at 7:35 P. M.
July 19th and 20th—Enroute.
July 21st—Arrive Chicago at 10:00 A. M., and leave at 2:00 P. M. via "Dixie Limited."
July 22nd—Arrive Atlanta, Ga., at 8:55 A. M.

Optional Return No. 5-E

This comprises direct return to Atlanta by rail.

Optional Return No. 6-F

This comprises return to Atlanta by rail via San Francisco

Prices

Atlanta to Atlanta—Tour No. 1 and 1-A $355.00

Atlanta to Atlanta—Tour No. 1 and 2-B	345.75
Atlanta to Atlanta—Tour No. 1 and 3-C	383.00
Atlanta to Atlanta—Tour No, 1 and 4-D	370.40
Atlanta to Atlanta—Tour No. 1 and 5-E	250.25
Atlanta to Atlanta—Tour No. 1 and 6-F	266.50

Itinerary to Portland and six optional returns from Portland include all cost of transportation, Pullman, hotels and meals to Portland; room in one of the best hotels at Portland while there; transportation, and Pullman with meals at Yellowstone Park on return. On return trips 5E and 6F only rail transportation is included.

For reservations address: American Express Company, 91 Luckie St., N. W., Atlanta, Ga. *Or* Medical Association of Georgia, 139 Forrest Avenue, N. E., Atlanta, Georgia.

LABORATORIES OF

DRS. BUNCE, LANDHAM and KLUGH

ATLANTA, GEORGIA

GEORGE F. KLUGH, M. D., Director Laboratory of Clinical Pathology
JACKSON W. LANDHAM, M. D., Director Laboratory of Radiology (X-Ray and Radium)

Pathology, Bacteriology, Serology, Metabolism, Chemistry, Electrocardiography, X-Ray and Radium

These laboratories are equipped for making every test of clinical value in the diagnostic study of medical and surgical cases.

In addition to the diagnostic study of cases there are adequate facilities for the x-ray and radium treatment of conditions in which these forms of treatment are indicated.

Containers for pathological specimens and information furnished upon request.

Address

Drs. Bunce, Landham and Klugh,

139 Forrest Avenue, N. E. Atlanta, Ga.

STUDIO OF SPEECH READING

KINZIE METHOD

REGULAR AND ADVANCED COURSES

Private Lessons *Graded Practice Classes*

MRS. SAINT JULIEN CULLUM

DURING THE WINTER AND SPRING MONTHS

Miss Lucy W. McCaughrin will give the normal course.
Miss Virginia will give courses for hard of hearing children.

510 GREENE STREET AUGUSTA, GEORGIA

AWTRY & LOWNDES
FUNERAL DIRECTORS
AMBULANCE SERVICE

Lac-Bismo
(HART)
See Description, Journal A.M.A. Volume XLVII, Page 1488.

A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water. Each fluidrachm contains 2½ grains of the combined salts in an extremely fine state of subdivision.

MEDICINAL PROPERTIES: Gastric Sedative, Antiseptic, Mild Astringent and Antacid.

INDICATIONS: In Gastro-Intestinal Diseases, Diarrhoea, Dysentery, Cholera-Infantum, etc. Also suitable for external use in cases of ulcers, etc.

E. J. HART & CO., Ltd.
Mfg. Chemists
New Orleans

HAY FEVER

has been prevented in thousands of cases with

POLLEN ANTIGEN

Introduced by the
Lederle Antitoxin Laboratories
in 1914

Since the introduction of Pollen Antigen Lederle, each year has added evidence to the value of this product in the prevention or relief from symptoms of Hay Fever, and each year an increasing number of physicians have familiarized themselves with the Hay Fever problem and are relieving patients of their seasonal attacks.

PROPHYLACTIC TREATMENT

may be commenced as late as two weeks before the date of the expected attack. Fifteen graduated doses of an appropriate Antigen are required. Patients usually suffer little inconvenience from the injections, and many are completely protected from Hay Fever attacks.

Literature on request.

LEDERLE ANTITOXIN LABORATORIES
NEW YORK

Lubricant Laxative Antacid

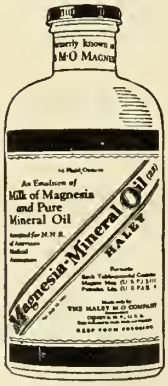
Uniform, permanent, unflavored emulsion of Liquid Petrolatum (U.S.P.), and Milk of Magnesia (U.S.P.), palatable, non-irritating, does not disturb digestion.

Magnesia-Mineral Oil (25)
HALEY

Accepted for N. N. R. of the American Medical Association

formerly Haley's M-O Magnesia Oil

Intestinal lubricant, fecal softener, antacid, emollient, laxative.



Clinical experience gathered from thousands of physicians by questionnaires suggests its use in Oral or Gastro-intestinal Hyperacidity, Fermentation, Gastric or Duodenal Ulcer, Intestinal Stasis, Autotoxemia, Obstipation Colitis, Hemorrhoids, Pre or Post Operation, Pregnancy, Maternity, Infancy, Childhood, Old Age. As an antacid mouth wash.

FORMULA:
Each Tablespoonful Contains
Magma Mag. (U. S. P.) ʒ iii,
Petrolat. Liq. (U. S. P.) ʒ i.

Generous sample and literature on request

The
HALEY M-O COMPANY, *Inc.*
Geneva, New York

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | May, 1929 | No. 5

PRESIDENTIAL ADDRESS*

C. K. SHARP, M.D.
Arlington

At the outset permit me to extend to you my heartfelt thanks for the great and unmerited honor you have conferred upon me. The past year of my incumbency as your President shall go down through the balance of the years allotted to me as a happy memory. I have striven to make it a service without errors but being merely human, these will creep in, but you must know that they have been of the head and not of the heart.

In casting about for ideas upon which to build an address, one that might be of some interest to this enlightened assembly, the question of theme is to me, a most difficult matter. I might speak to you on the subject of great problems in medicine were I capable, but the essays you have heard and will hear read and discussed at this meeting alone fill you to the fullest in medical lore. I might present to you the history of medicine from the beginning of time; this would be to you as dry as a didactic lecture in anatomy. I might recite to you a synoposis of the lives of our mdeical forefathers, many of whom have died the heroic death of the martyr and have left behind them records of service that have gone down through the ages; this story you have read or heard. Every conceivable subject has been covered by my honored predecessors. Then, the question arises, what field can I treat on that will offer food for thought and reflection?

My entire professional life has been spent delving in medicine as I have met it in the rural districts, in a general way, where I am considered an internist, a surgeon, an obstetrician, a pediatrician, a public health expert, a bone-setter, an eye, ear, nose and throat man, and to my everlasting condemnation, an alienist; and were I to relate to you my experiences for the past thirty years, you would likely be kept alternately between a tear and a smile; but it strikes me forcibly that this is no time nor place for sentiment all together, thereby my talk will bring to your attention some of the trials and hardships as well as pleasures incident to the life of the country physician; he of the Genus Medico Ruralensis, if you will pardon me, a specie fast becoming extinct.

There are so many questions that confront us as medical practitioners, each striving to arrive at the truth of matters pertaining to our calling, it occurs to me that if I could bring to you some words of cheer, of comfort or perhaps of warning, all meant for our common good, then, my efforts will not have been entirely in vain.

The teaching of modern medicine in the past two decades has been more or less radically different from that taught thirty years ago, and as a result, we older men through necessity have had to unlearn much of what we were then taught, and as first impressions are the most lasting, this transformation has not been an easy one. More truth has been arrived at during the past twenty years than for many decades prior to this period.

In former years the physician's ability was largely estimated by his personal appearance; for in view of our present attainments, we realize how little of real value was then known. Visualize a man (there were few women physicians then), past the age of fifty—young men made painfully slow progress—with his silk hat, Prince Albert coat, long grey beard, driving an enviable horse and buggy, a much extended waist-line and a sphinx like demeanor; he was a mystery, and was set apart from other men and could

*Address before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

often be identified by the odor of iodoform on his person, but, with all this he was respected and his word was law. He was the councilor and intimate friend of the family who appealed to him with all ills, woes and secrets and he was rarely ever known to betray a trust. Then, the laiety was ignorant of affairs medical and anything could be "put over" on them. Health Journals were not commonly read teaching them what the laiety should know. What was lacking in the physician in medical attainments was made up for in a quiet dignified mien, and when calomel and jalap, lobelia and ipecac, jaborandi flyblisters or opium failed to put a patient on his feet he was about to his limit in therapy.

In my past experiences I can recall now many cases of typhoid fever that in all probability died of starvation; of malarial cases that were inadequately treated; the maternity cases with all too frequent morbid manifestations; of unnecessary wound infections; of acute surgical conditions that too frequently proved fatal for the want of prompt operative intervention, or necessitated a prolonged hospitalization with the attendant disability following: The unrecognized cases of pellagra; the pitiful plight of the diabetic, the many disorders due to dietetic errors; the hopelessness of the victims of primary anemia; and on down through a long list of other maladies and their treatment that modern science has revolutionized.

This is indeed a new era in medicine. We are basking in the bright sunshine of truth and a more exact science, and with eager anticipations we are looking to the future for more light which will burn brighter and brighter throughout the balance of time when, through education and kindred agencies, disease incidence will be a serious reflection on our civilization and there will be no need for physicians as they are now known.

This is the day of the young man in medicine. It appears that the more recent his graduation from an A grade medical school the more qualified he is to successfully meet the many problems involved, and by actively meeting these conditions and keeping abreast of the times as the years go by by means of unceasing study, "his ways will be ways of pleasure and his paths, paths of peace." Older men who have kept apace with medical progress during the last thirty years, who have discarded old theories and have accepted and applied proven facts are without peers in medicine; but how many of us, especially in the rural districts have done this; how many have had a chance to do it with such demands on our time. Perhaps many of us have sunken into the rut of indifference from which we find it difficult to extricate ourselves; may be other interests outside our profession have lessened enthusiasm in our work. About the best the average man among us can do is to cull what he can from periodicals, year-books and short periods of post-graduate study. Textbooks of the vintage of five and ten years ago are in many respects obsolete. Larger volumes are rarely read to any extent by rural physicians and something more concrete is sought for. How many of we older men can really grasp medicine as it is taught at this time with our meager knowledge of modern physiology, chemistry and pathology. "New times demand new measures and new men." (Lowell.)

What does the future offer to rural inhabitants in need of medical care? When we realize that the average age of the rural and small town physician in Georgia is fifty five years, we must acknowledge that it will be but a few years before these sections will be deprived of immediate medical care unless the people themselves arise to the emergency and establish county or community hospitals presided over by competent physicians and nurses, or, in case of the physician without these means furnished, he must of necessity have an adequate compensation underwritten by responsible free-holders. A young man starting a rural practice without these necessities, with no means to procure them, will surely stagnate unless he possesses an unusual amount of adaptability; even then his work will be unsatisfactory at least to himself. The dangers of the socialization of medicine seems not far distant as a result.

Personally, my years of practice have been

filled with pleasure. My patients are still loyal and trusting. The motor care has obliterated distance. The great open spaces have an appeal. The means of recreation that have surrounded me, the humorous incidents constantly arising and the one item of daily routine which we could all profit by, that of meeting the rising sun with a buck saw and a pile of cord wood; all these have contributed to a perfect state of physical well-being.

Someone has said that "we amuse our patients while nature heals them"—which is largely true except in the few ills for which we have specific remedies. Infinite variety of ills and injuries marks the days work and we never know what a day or hour will bring forth, what problems to solve with the limited means at hand to help us solve them. The five special senses are ever present, friends in the time of trouble which after all and under all conditions are the most dependable.

The indifference the laiety has manifested toward compensation of its physicians in the past has made living conditions well nigh unbearable and the hardships incident to a country practice with extremely irregular hours, with a clientele in many cases unenlightened and steeped in superstition, there is little wonder that hospital and laboratory bred young men are refusing to locate in rural districts.

In communities with just a few physicians there is often a spirit of envy, of backbiting and occasionally of open hostility instead of that spirit of cooperation, mutual interest and confidence that should prevail. This ugly manifestation adds greatly to the hardships of the country doctor; it is difficult to explain it except on the grounds of a fight for bread. How happy we all could be if we stood four square, shoulder to shoulder, ever laboring for our mutual good, studying ways and means of bettering our material and professional welfare. It is primarily the function of the County Medical Society to correct these conditions, and let us look forward to the dawn of a new day when doctors everywhere and under all conditions may be brothers indeed. If the principles of medical ethics laid down by our forefathers for us as a guide and light to our footsteps are practiced in letter and spirit, this serious objection will be overcome and then he who speaks unwarrantably against the character and reputation of one of the medical faith, let his name be anathema.

Physicians of all ages have been subjected to ridicule and witty caricatures which in the past was evidence of his shortcomings in his dealings with the sick; even in the Book of Books we read in Chronicles as follows: "And Asa in his disease, sought not the Lord but unto the physicians; and Asa slept with his fathers"—thus this pastime had its beginning in remote antiquity. There will be perhaps some improvement along this line as medicine becomes more and more an exact science. I am sure as the years go by and as we become more enlightened, we will be much more respected as a profession. I am inclined to think that if we devote more time to our patients, take more interest in them, and give them a more searching examination when they apply to us for advice and treatment, the more they will respect us and the better they will pay us and the smaller the cults' clientele will be. Simply inspecting the tongue, feeling the pulse and asking a few stock questions with a prescription pad in hand is not proper service and is not worthy of the true physician, and if the patient fails to compensate us we have no one to blame but ourselves. Service and duty are inseparable words and the physician who does his duty to the fullest is happy indeed and is certainly the most beloved citizen in his community.

The Medical Association of Georgia had its beginning four score years ago with a mere hand full of forward-looking men, inspired with zeal for the advancement of the cause of medicine. In its ranks we can point with pride to men whose records of service will forever mark them as immortal. This heritage should inspire us to "carry on" and contribute our bit toward obtaining that perfect day in medicine when that which is still dark and unknown to us may be brought to light. The past year as its President has been a benediction to me. My stewardship has enabled me to realize fully its value as a medical organization, and as a means for the pro-

motion of medical progress, and no physician who is eligible (and all who are not should make themselves eligible), should withhold his active membership. It has been to my pleasure and profit to visit all the District Societies and it is with much satisfaction that I note a uniform zeal throughout and a fraternal spirit that is growing more and more, and the scientific programs have reflected credit on the membership. Were I asked to criticize the District and County Societies and their activities would call their attention to an apparent lack of interest, with few exceptions, in matters involving public health and instruction; these agencies are the best means of enlightening the public as to health promotion and proper living conditions. Weekly talks through the medium of the local press authorized by the County or District Medical Societies and by individual physicians to civic and other bodies when invited to do so, is a service of incalculable benefit. The people should be educated as to the necessity of periodic health examinations for the apparently healthy; teaching them to associate their birthdays with an annual stock taking as to health, thus year by year finding out in time their weak points that if neglected would prove hazardous and beyond repair. We might adopt some simple slogan in this connection, such as: Invest In Health for Health Is Wealth; You are one year older today. An examination blank devised by one of our valued members seems the best form extant and can be had by applying to our secretary. All our standing and special committees are working faithfully, efficiently and unselfishly, but I want to call your attention particularly to our Committee on Public Policy and Legislation with Dr. C. E. Waits as chairman. This committee is working untiringly and may I urge each and every one here present as well as all members who are absent, to put their shoulders to the wheel and assist this committee in every way possible to carry out our legislative program to a successful conclusion. The Basic Science Law with which we are all doubtless familiar, will be introduced for passage at the next session of the legislature, next month, and for the sake of the public welfare and decent medicine in Georgia let us not rest until this law is made effective. Other bills may be introduced which are worthy of our support, but let us safeguard the Basic Science bill at all hazards.

In connection with our legislative program let me call your attention to the needs of our State Board of Health. Let us interest our legislators in the urgent needs of the Board. The per capita tax for health purposes in Georgia is the lowest of any state in the Southeast and it is amazing what has been accomplished with the limited means at their disposal. Give the State Board of Health the appropriation it asks for and Georgia will take her place beside other progressive states. Georgia can never come into its own from an industrial and agricultural standpoint until malaria, our greatest scourge, can be eliminated. The incidence of this disease during the past year has been the greatest of any in the past thirty years, and knowing what we do as to its propagation and the means by which it is broadcasted, it is up to the physicians of the state to guide the proper authorities as to its eradication. This is especially true of the physicians of South Georgia, where malaria is the chief obstacle to our material welfare, to say nothing of its diabling effects. Dougherty county has inaugurated county wide malaria eradication program this year, employing means suggested by the United States Public Health Service, and this campaign will be an object lesson to the balance of the state.

Let me urge upon the physicians of the state a more thorough co-operation in carrying out the provisions of the Vital Statistic Law. We are now in the registration area of the United States and let us keep this position. The principal offenders are in counties without the benefits of the Ellis Health Law, but there is no reason why all physicians can not fill in the cards sent by the State Board of Health Weekly, listing all reportable diseases; in this way alone can our epidemiologists be kept informed as to disease prevalence. Failing to report all births and deaths is wanton negligence and is not conducive to the proper functioning of the Vital Statistical Law.

The Association owes a great debt of gratitude to those faithful men composing the Council; they are working heart and soul for its interests in striking contrast to the perfunctory manner in which their duties were performed in the earlier years after the reorganization. The Council is the moving and sustaining force that keeps the Medical Association of Georgia the smooth running machine that it is. All honor to them.

I can not close this discussion without a word for our ace of trumps, the Woman's Auxiliary. In some sections of the state there seems to be a groping for plans of activity. We should help these noble women find themselves. They fill a place that no other agency can fill and what is to our interest is to their interest. They are heart and soul with us. Dr. Charles J. Whalen, of Chicago, suggests the following activities for the Auxiliary:

1. Community education in sanitation.
2. Community education in the necessity of periodic health examinations.
3. Community education in what scientific medicine has done for Public Health and Welfare—research and therapeutic advance.
4. Community education as to dangers as to cults and charlatanism.
5. Community education as to the dangers of false doctrines and false reforms.
6. Community education as to the dangers of Socialized medicine community control of the practice of medicine.

Let us inculcate these ideas in the Auxiliary and detail to them working plans suitable to local conditions. Each County and District Society should have a well organized Auxiliary with an advisory committee from each Society.

In conclusion, let each of us take courage and look to the future with uplifted faces and do our bit toward placing our beloved profession in its rightful place, championing every agency that makes for the uplift and betterment of mankind, and then in the language of the poet:

"The world will not be hard to leave
  If I have set myself a task
And finished it. I need not grieve,
  Nor need another day to ask,
If I shall leave a better land,
  A fairer city, gladder heart,
Or minds that better understand,
  When I depart."

"If I have taken but a patch
  Of idle ground and made it bloom,
Have built one house of brick or thatch,
  A mansion or a single room,
If I have tried to be a friend,
  Have made one life a bit more fair,
When all these things are at an end
  I need not care."

"This only makes the leaving sad;
  To look across a desert waste
Of opportunities I had
  And idly spurned or passed in haste,
To think the world, that men of worth
  Had labored for so willingly,
Is not a little better earth
  Because of me."

"I must reorganize my life,
  Must take some part, if great or small,
In some good cause, some common strife,
  To serve the common good of all.
Then when at last I must resign
  This life, with all its joys and pain,
I may go bravely, knowing mine
  Was not in vain."

(Author Unknown)

FADS AND QUACKERY IN MEDICINE*

Morris Fishbein, M.D.

Editor Journal American Medical Association and of Hygeia, the Health Magazine.

Chicago, Illinois.

Quackery in medicine is as old as mankind. From the time when the first priest-physician attempted to conjure forth the demon of disease from some ailing human body by the use of incantation or charm, faith healing appeared. It can be traced in a definite evolution from that day through the medicine of the middle ages, through the time of Paracelsus to Mesmer, the founder of mesmerism, to phrenology, Phineas Parker Quimby and mind healing, Mary Baker Eddy and Christian Science, healing by the laying on of hands, healing at the shrines, healing by manipulation, as the chiropractic and

*Address before the Medical Association of Georgia, Macon, Ga., May 9, 1929. Guest.

osteopathic types, healing by such weird conceptions as those of Albert Abrams and Gaylord Wilshire, indeed healing by modern scientific medicine, for in every type of healing faith plays its part. It is the task of the scientist to separate from actual knowledge the mysteries and the magic of these strange notions.

Hippocrates, the father of modern scientific medicine, described the *vis medicatrix naturae*, the healing power that lies with the body itself, the tendency of the human tissue to recover. Every faith healer and magician since the beginning of time has depended on this effect. From it arose the *post hoc proctor hoc* fallacy. The scientific man says, "I did this and that happened;" the charlatan says, "I did this, therefore that happened."

Within the human being is a craving for miracles. This craving might be satisfied by the truth regarding scientific medicine, because there is nothing more wonderful than modern medical science, but knowledge does not seem to satisfy the addiction to romance that seizes upon the minds of the credulous. A very eminent psychologist, P. T. Barnum, said that there was born in this country one sucker every minute. The saying was improved by Joseph Jastrow, who remarked that there was a sucker born every minute, and a crook born every hour to take care of sixty suckers. The ratio is one that has not changed since the beginning of time; it is not likely to change in the future, even with the birth of a great many eugenic babies.

The charlatan is not peculiar to medicine; there are charlatans in every field—in the law, in the ministry, in trade. The charlatan in the law is familiar to all of us—the man who gains his verdict by appealing to emotion rather than to reason, who actually cries the jury into a verdict of acquittal for some handsome damsel clad in black who has caused her husband to depart unduly rapidly from this mundane sphere. The charlatan in the ministry is again typical—pounding upon the altar, he calls upon all the gods of the kingdom of swat rather than of the kingdom of what, and he gains his converts more by perspiration than by inspiration. The charlatan is usually an egocentric person, gifted in speaking, full of personality, indeed overflowing with that strange characteristic known to the residents of Hollywood as "it." If he is in the field of faith healing, he is likely to claim divine inspiration and to point out to his followers that his knowledge came to him as a gift from a higher power and that there came to him also a call to go forth and heal. He is likely to carry after his name a long list of alphabetical appendages, indicating degrees of education that he has never had and an erudition that he does not possess. Sometimes, no doubt, the charlatan is in the beginning self-deluded; sooner or later he comes to realize that he has not the power that he claims; then, finding himself in a blind alley from which he cannot escape, he becomes consciously deluding.

The followers of the cultist are to be found in every grade and every class of society. They are not always the most ignorant; indeed, one finds them just as frequently among the artists, the actors, the lawyers, particularly among that group known as the intelligentsia, who have been described as those educated beyond their intellect.

Following the time of Hippocrates, Galen and Celsus, famous Greek and Roman founders of modern medicine, there came a period known as the dark ages, when men gave more thought to their souls than to their bodies, not realizing that a healthy soul can exist only in a healthy body. During that time the light of medicine was kept alight by the Arabian, the Hebrew and the Eastern physicians, Rhazes, Albucasis, and many others. Then came the middle ages with the foundations of modern anatomy, physiology and pharmacology. In that time Vesalius made a pilgrimage to Palestine to atone for the dissection of a body. Michael Servetus was burned for heresy. Leonardo da Vinci wrote in mirror writing to conceal his investigations. The chemists worked weird mysteries in an attempt to turn the baser metals into gold. Among them stood supreme that strange combination of charlatan, scientist and theologian, called Paracelsus. Christened originally as Theophrastus

Bombastus von Hohenheim, he came to be known eventually for the names he adopted as he traveled about as Philip Aurelius Theophrastus Bombastus von Hohenheim Paracelsus. He too had worked alchemy, but he had described uses of many metallic substances in the control of disease, and by his magic and symbolism had, it is reported, given rise to the order of Rosicrucians, antecedents of the modern Masonic order.

Thus Paracelsus knew of the power of suggestion and he wrote in his works of the importance of recognizing the influence that the mind has upon the body. His period was the same as that of Christopher Columbus, who discovered America.

In 1628, William Harvey published his famous work on the circulation of the blood. A new scientific era began, but with it came also a new charlatanism. Whenever a scientific discovery is made by some earnest worker in medical research, there are always available dozens of charlatans who capitalize those discoveries for personal gain.

In 1700 the world began to talk about electricity. Shortly after the Leyden jar was discovered in Holland, Benjamin Franklin flew his kite and drew down lightning from the skies. Every one was talking about electricity without having much actual knowledge of its phenomena. In 1745 there appeared in London, coming from the provinces, one John Graham who called himself "John Graham, servant of the Lord, O. W. L."—a combination of faith healer and charlatan. Graham established a temple of health in London, putting a statue of Venus inside the temple and a statue of Hygeia, daughter of Aesculapius, outside the temple. One might see Hygeia without paying a fee, but at least two shillings were required for a view of Venus. Within the temple stood the celestial bed, a magnetic device for the cure of sterility. On the payment of 250 pounds the desiring but incapable couple were permitted to sleep in this device one night. It was connected with electric batteries which, however, did not convey their current directly to the occupants. There also could be purchased the elixir of life and there too were marvelous mud baths for the passing into the human body of magnetic waves. Preposterous perhaps, but not nearly as preposterous as the weird notions of our own Albert Abrams or of the dozens of the modifications of Gaylord Wilshire's I-On-A-Co!

Think too of the name of John Graham and of the letters which followed it, O. W. L. That stood for "Oh Wonderful Love!" a phrase which is repeated again and again by faith healers and cultists through the centuries that followed and which reached its apothesis at last in Elmer Gantry's famous paraphrasing of Ingersoll's message on love.

In 1778 Frederick Anton Mesmer appeared in Paris, coming directly from Vienna and exploited as the famous Viennese physician. He charmed his acquaintances with his wit and his ability to play upon the piano and the harmonica. The words with which he conjured were animal magnetism. In the circle of the great hall, amidst soft colors of light filtered through stained glass into shadows cast by dark draperies, the patients sat in two concentric circles. Music played softly, and fragrance of strange incense was wafted through the air. In the center of the circle was a large tub full of bottles of water which rested on layers of powdered glass and of iron filings. Each of the persons in the circle held an iron rod and all were connected by a rod looped around their bodies and passed back to the tub. Mesmer and his assistants passed about the circle, pointing iron rods to the spots where disease was supposed to rest, placing their hands upon the patients and suggesting to them that the disease had passed and that the cure was waiting. So powerful was the effect of this ensemble upon the emotions of the patients, and most of the patients were ladies, that a little hall had to be built adjacent to the main room to which those ladies who responded by convulsions might be carried until they had recovered their equilibrium. The hall was known as salle des crises—the hall of fits.

The success of Mesmer was tremendous. Imitators began to appear. Soon he found that by his suggestions the patient could be caused to pass into a trance state, and that when in this state he was even more suggestible than in the waking state. As late as

1815 Mesmer was still trying to explain how his results were accomplished. By that time, however, hundreds of imitators and disciples had begun to set up their halls of magnetic healing in France and other places. Some had emigrated to America and were demonstrating the mesmeric phenomena in temples of healing or in itinerant vehicles.

In the meantime, America had produced its first great quack—Elisha Perkins. It was the strange notion of Elisha Perkins that all human disease was an electrical manifestation and that disease could be taken from the body by the use of two electrodes about the size of a nail; one of an amalgam of iron, another of an amalgam of zinc. The disease was to be drawn from the body by drawing the two electrodes downward over the system. He cautioned the people against drawing them upward, saying that this would intensify the disease. They cost him about 25 cents a set to manufacture and they were sold for $5 a set, which was a great deal of money in the currency of that day.

He promoted them largely by the use of the testimonial. The testimonial has always been a significant factor in the promotion of cultism and quackery. Elisha Perkins was able to get testimonials from senators, from congressmen, indeed, even from the governor of Pennsylvania. George Washington purchased a set for the use of his family, and the Chief Justice of the United States, the Honorable Oliver Ellsworth, gave Perkins a letter of introduction to John Marshall, his successor.

In the same way some of our own senators and congressmen still are available for the testimonial industry.

Billy Mason, congressman, testified as to the virtues of nuxated iron; Senator Royal Copeland has permitted the publication of his testimonial for Buffalo lithia water and for pluto water, and the former at least is inactive. When Sanatogen, a glorified cottage cheese, was making its bow to the American public, artists, statesmen and tragedians vied with one another in singing its praise. Today the testimonial is used largely for the promotion of yeast as a panacea for all human ills, and the photographs of allegedly eminent foreign scientists have replaced those of Miss Rivergrove Nevada, who can now swim the Colorado River, whereas formerly she was unable even to push the baby buggy. Alice Roosevelt Longworth and the Queen of Roumania testified as to the beautifying qualities of massage creams, and noted stars of the motion pictures when blindfolded are able to distinguish between cigarettes, a stunt that has baffled many eminent scientists.

Indeed, the procuring and sale of testimonials has become in itself a remarkable industry. There are firms in New York that will sell testimonials in bundles of 5,000, having purchased them from derelict promoters of nostrums. The promulgator of any new device can write in his own apparatus and pick his diseases.

Elisha Perkins had a son named Benjamin Perkins, who took the tractors to England, and England fell harder than any other country for tractoration. Testimonials were secured from all sorts of reverends, including the chaplain to the Prince of Wales.

Eventually it occurred to medical practitioners to make a pair of tractors out of wood and to fix them up so that they would resemble the original specimens. When these were tried in the dispensary, it was found that patients were cured just as quickly with the wooden tractors as with the metallic tractors. Furthermore, attempts were made to test the tractors on a horse, and the experiment failed. A horse never gives a testimonial, hence the term "horse sense." Benjamin Perkins died in 1810, at the age of 37. By 1811, people were speaking of tractoration as one of the follies of the past.

About the time of Perkinsonism, homeopathy and eclecticism, two schools within medicine itself, appeared upon the American scene. From the earliest times, cults had formed again and again within the practice of medicine. Homeopathy, a weird conception of Samuel Friedrich Christian Hahnemann, believe in attenuated drugs, in the theory of vibration, and in other notions which have not stood the test of modern scientific investigation. It was accepted because it represented a reaction against the stringent practices of the end of

the eighteenth century, a time when the most popular prescription was known as Rush's thunderbolt, a mixture of 10 grains of jalap and 10 grains of calomel, given in a single dose. The homeopathic remedies were so attenuated that a little girl in Virginia ate $8 worth of homeopathic medicine, the entire family supply for a year, without developing a symptom. Nowhere did homeopathy flourish as it did in the United States, but the number of colleges diminished from 21 at the height of the career of this school of medical teaching to two colleges today, and during 1923 there were just 49 graduates from these two schools.

From every school modern scientific medicine learns something. It absorbs from them that which is good, if there is any good, and then they die. From homeopathy it took a reaction and a philosophical conception; from other schools, it has taken other basic principles.

The eclectic school of medicine promoted by Thompson, Tidd and Wooster Beach emphasized the use of plant remedies with specific claims for each of the botanical categories. Many of the plant remedies vaunted in 1800 have passed today into the bourne of forgotten drugs. But a few have been studied by the technic of scientific pharmacology and constitute valuable additions to the medical armamentarium. Only a single college of eclectic medicine still remains in this country and its time is probably not long.

One of the disciples of Mesmer who came to the United States established a temple of magnetic healing in New Orleans; another traveled about England giving mesmeric demonstrations. When he stopped in Belfast, Maine, he was seen by Phineas Parker Quimby, a combination jeweler and blacksmith, discoverer of mind healing. The period was one full of revivalism and strange notions. It is possible to trace a definite relationship between spiritualism, Christian Science, new thought, mesmerism, medical quackery and phrenology.

The reaction to the fundamentalism of Jonathan Edwards was the formation of dozens of strange medical-religious cults, which included the Dunkers, Muggletonians, Come-Outers, Groaners, Agrarians, Pemilos People, Holy Rollers, Esoteric Vibrationists and Psychic Scientists. Woodbridge Riley pointed out that Mrs. Eddy's teaching derived from three influences primarily—shakerism, Quimbyism and Alcott's metaphysical system. First Quimby practiced the system of rubbing, which brings to mind the mesmeric electrical magnetic methods, but he felt eventually that all of his teaching was by the power of the mind. One of his first patients was Mrs. Julius Dresser, who, with her husband, became a leader of New Thought. His most important patient, however, was Mary Morse Baker Glover Patterson, who came in 1862, when she was 40 years of age. She had lived up to that time a difficult existence, including two marriages, one of which was followed by the early death of her husband and the other by a divorce, during which she endured numerous periods of illness and eventually a form of hysterical paralysis. Of the last, Quimby cured her after two treatments, and she climbed 182 steps to the town hall as proof of her recovery. This cure, cited as a miracle, is of course merely the effects of the application of psychotherapy. Now began a marvelous correspondence between Mrs. Glover and Dr. Quimby, which has been preserved in various volumes. She wrote to him enthusiastically and extravagantly. She composed love sonnets addressed to him. In 1864 she returned to Portland and stayed three months. She spent all her afternoons with Quimby looking at his books on religion, spiritualism and every other subject, patterning her conversation after his views, discussing his methods and even trying to cure some patients.

She dipped into spiritualism, calling up the spook of her dead brother. And then, when she seemed to have found a satisfactory niche in life, one in which she could be happy, as secretary to and collaborator with Quimby, he became suddenly affected with an abdominal tumor and died January 16, 1866.

Mrs. Glover, in possession of some of his manuscripts, secured others and began to edit them, copying them and adding interpretations and commentaries of her own. She

spoke constantly of her manuscripts and of the new revelation which was to end disease. She became a conspicuous figure in the small towns of the neighborhood of Boston.

At least three years before Mrs. Eddy came to Quimby, he had begun to put on paper his views of healing by the mind. According to his son, he began in 1859 to write out his ideas, giving the original copy to some girls named Ware, who were the daughters of a judge. They would read the manuscript to Quimby while he would make alterations, after which it would be copied and then re-read to him. He refused to permit even the most trivial word or sentence to be changed without personal consultation. He was much given to repeating himself and would frequently refuse to have the repetition eliminated, saying, "If that item is a good one and true, it will do no harm to have it in two or three times."

So Quimby produced more than eight hundred closely written pages covering one hundred twenty subjects and it is said Mrs. Glover never saw a page of the original manuscript, but worked instead from a copy of a copy made by Julius A. Dresser. Later she claimed that the Quimby manuscripts were her own, but there are numerous witnesses to deny every one of these claims.

Long after the death of Quimby, Mrs. Eddy testified on the witness stand that the idea for Christian Science came to her before her eighteenth year. Perhaps it did, but the evidence that it did not is far more conclusive than that upon which murderers are hanged regularly in the United States. It would seem that Quimby did far more for Mrs. Eddy than merely relieve her of her illness.

Most of the evidence as to the plagiarism of Quimby's writings by Mrs. Eddy is well summarized in the book on Christian Science by Lyman P. Powell, rector of St. John's Church in Northampton, Massachusetts, published in 1907. "The lucidity of Quimby's writings as compared with those of Mary Baker Glover Patterson (for she was not yet Mrs. Eddy) is," he says, "like comparing Lincoln's Gettysburg address with Science and Health." Mark Twain and many others have told of the impossibly bad English indulged in by the egocentric founder of our greatest healing cult. She referred in a letter to "Irving's Pickwick Papers!"

Just after she was fifty years old, in the summer of 1870, Mrs. Glover came to Lynn, Massachusetts, and she was associated with various men to whom she taught mind healing and with whom she worked. At first her students paid her $100 each for a course of ten lessons and 10 per cent of all of their future earnings. Eventually the charges were increased to $300 for 12 lessons, and finally to the same sum for seven lessons. In a period of three years she had more than 1,200 students, which is some indication of the extent of her income. Through the establishment of additional courses, and the sale of books and periodicals, she built a tremendous fortune. On December 14, 1910, she died of pneumonia at the age of 89 years. Of course, Christian Scientists do not die, because in that tender gospel there is no poverty, no illness and no death, so Mrs. Eddy merely passed on into a new existence. Today there are in the United States some 37 schools of religious healing, embracing approximately 10,000,000 adherents. There are about 7,200 Christian Science healers and 1,600 Christian Science patients in the sanatorium. But there has come a break in the organization, a new movement which insists that the high priestess herself took morphine regularly during the last years of her life to relieve her of pain, and which would have this combination of science and religion become purely a religious cult movement and leave science to the physician.

All of the religious healing cults emphasize the name of science in connection with the religion adopted. They include the Unity Movement, New Thought, Divine Science, Applied Science, Scientific Christianity, the Emmanuel Movement, and indeed Jewish Science, founded by the Rev. Morris Lichtenstein, of New York, no doubt, with the idea that it is unfair for one religious group to get all the easy money.

The modern application of faith healing is either of the type of Coue, with his autosuggestion—the little French druggist who

was exploited by great newspaper and lecture syndicates for financial gain—or the psychological quack who exploits Freudian sexologic and the methods of the charlatan for his personal profit. One sees him at his work. The large auditorium is filled with beautifying gowned women. There is a subdued hum of chatter and light laughter. Silently the magnificent maroon velour curtains are parted, as though by some invisible genii. The lights become dim. Then there walks —almost glides—on the stage a man faultlessly attired, his lustrous hair brushed back from a pallid countenance.

The audience is hushed. He begins to speak in sympathetic tones, pouring forth well rounded but meaningless phrases about the perfection of ideality, happiness through the sacrifice of the eccentric Ego, the attainment to Nirvana through immolation on the pyre of ideal scientific introspection. He promises youth and health to those who will believe and study.

And the audience—women, occupiers of one room kitchenettes, suffering with the ennui of idleness, faces elaborated with artifices in attempt to stimulate the long lost buoyancy of youth—sighs happily as it dreams of the mirage he brings up before it. Quiet ushers pass along the aisles, and with sibilant whispers distribute cards on which arrangements may be made for personal consultation with the professor.

After healing by faith alone comes healing by the laying on of hands, the two most eminent disciples of which are perhaps the Rev. John R. Straton, of New York, and the Rev. Aimee McPherson, of Los Angeles. Under the appeal of the emotions, since the beginning of time, persons have been suddenly cured of hysterical paralysis. Of this nature are the healing of a deafness by a fall in an airplane, the healing of shell-shocked soldiers after the war by cultists and quacks and by strange manifestations. The person who goes to a shrine for a cure does so in search of a miracle. One does not go to a shrine to be fitted for glasses or for a set of false teeth. Under the impulse of frenzy a chronic rheumatic will move a contracted limb. A sufferer from heart disease, bed-ridden for years, may attempt to walk. The results not infrequently are disastrous, but the public hears only of the cures—never of the failures.

Healing by the manipulative cults, such as ostopathy and chiropractic, is essentially faith healing by the laying on of hands, except so far as the movements urged by the former are in the nature of massage. On June 22, 1874, Andrew Still, a free lance doctor among the Shawnee Indians in Kansas, flung to the breezes the banner of osteopathy. Convinced of the fact that this system of healing was a divine revelation, and being of a somewhat medical turn of mind, he planned a system of healing based on manipulations and adjustments. Since his time earnest osteopaths have attempted to make the cult evolve into something approaching scientific medicine with a view to giving it permanence. Unfortunately, it must be considered as merely a backdoor entrance into the practice of healing. It wanes constantly before the onslaught of chiropractic, the outgrowth itself of osteopathy, and of actual scientific medicine, which is not dependent on folly.

Chiropractic first saw the light in Davenport, Iowa, in 1894. D. D. Palmer, founder of the cult, was a magnetic healer who had sojourned briefly in Kirksville, Mo., under the tutelage of Andrew Still, founder of osteopathy. An experiment on a deaf janitor convinced him that all disease is the result of displaced bones in the spine, pressing on the nerves that pass from the spinal cord. This being the case, disease is cured by pushing the bones back. No one as yet has explained what makes them stay back. Since the propounding of this system, scientists have spent many hours of research on the question, but have found that the very basis of the cult is a fallacy. Actually the pressure that the chiropractors allege are responsible for disease do not exist. The present high priest of chiropractic, B. J. Palmer, son of D. D. Palmer, is a salesman par excellence. Salesmanship and advertising are conspicuous in the chiropractic curriculum. Palmer takes advantage of every opening. His latest device is a neurocalometer, which makes even the apparatus of Abrams a trivial and simple thing. The neurocalometer is put on

the back and presumably tells the chiropractor what bones ought to be pushed back into place. Costing probably less than $50, it was originally leased to chiropractors at ten years for $626 and ultimately brought as high as $2,500. The inordinate greed of B. J. apparently incited revolt in the chiropractic menage and out of it. But the selling system and the utter lack of any intelligence test for those entering the profession make it exceedingly popular as a side-line to blacksmithing, pugilism, physical culture and beauty shops. Today it is the great American medical folly.

An imitation of osteopathy is naprapathy, which says that it is not the bone that is out of place but the ligament, and that the cure is to be wrought not by pushing the bone back into place but by pulling on the ligament.

Another school of healing is naturopathy, practiced since the beginning of time as a nature cure, but today representing capitalization for purposes of financial gain of the old advice that outdoor life, good diet, enough exercise and rest are conducive to health and longevity. When these simple principles can be linked with the printing and sale of worthless pamphlets, intricate apparatus, or faith cures, the formula yields gold.

Today the disciples of Bernarr McFadden, head of the muscle school of medicine, practice not only the outdoor life but modify their system to include strange diets, air baths, water cures, light treatments, chiropractic, osteopathy, homeopathy, herbals, psychoanalysis, starvation and any other monkey business that any strange healer may bring temporarily into the limelight. For instance, schools of naturopathy teach among other courses sysmotherapy, glucokinesis, zone therapy, physicultopathy, astrological diagnosis, practical sphincterology, phrenological physiology, spectrochrome therapy, iridiagnosis, tension therapy and naprapathy.

Strangest of all of the quacks before the American public in the last quarter century was Albert Abrams, of San Francisco. After four years of promotion, he left a fortune in the millions. At the height of his success he was followed by perhaps 2,000 pupils. Today less than 100 practitioners continue to utilize his machinery and his methods in their attempts at healing of disease. Out of the ideas of Albert Abrams, B. J. Palmer developed the neurocalometer with which the chiropractor claims he is able to tell what bones are out of place even without putting his fingers on the spine, and Wilshire, of Los Angeles, developed the I-on-a-co.

The index file of quackery in the records of the American Medical Association contains more than 125,000 cards representing various forms of quackery that have produced shekels from the pockets of American credulity. The cures for cancer, for tuberculosis, for the venereal diseases and for the other complaints that afflict mankind are legion and new cures constantly appear upon the horizon. There are manipulative cults, faith healing cults, eclectic cults, mechanical cults, nature healing cults, dietary systems, and hot air treatments, if all of those that precede cannot be classed as the one named last. Practically all of the records of recovery credited to any of these fraudulent systems or devices may be classified as faith healing.

Today the quacks who cannot exploit their wares through the press seek an outlet over the radio, which has become in this way the greatest medium ever known for exploiting the superstitious and the ignorant. The radio has become a veritable sewer for the distribution of patent medicine and nostrum promotion which could not reach the public in any other way. Manufacturers of fake mechanical devices, mystics, faith healers, fortune tellers, food faddists and fanatics of every variety use the radio for the promotion of their claims. It is time that the government, through its radio commission, gave serious consideration to this problem.

The harm done by radio advertising is more serious than anything possible through newspaper advertising. The fact that radio broadcasting is controlled by a federal commission lends credence to the statements that come over the air. The persuasiveness of the human voice and the direct personal appeal are likely to sway the mind of the listener

more than does a printed statement. The promoters who travel the borderland between honesty and quackery, raking in the shekels of the unwary, have found in radio broadcasting a glorious accessory for their manipulations. The mutterings of mystics from India and of fortune tellers from France, the claims for hair growers from Austria, for magic horse collars, for radium drinking waters, for antiseptics, cosmetics, influenza and cancer cures, the sexual appeals of rejuvenationists, the mouthings of evangelistic and faith healers, and preposterous dietary schemes come pouring from the loud speakers like noisome effluvia from the great sewer that drains away the by-products of human physiology in a metropolis.

Physicians have long given thought to the means by which human beings might be disabused of their credulity and brought to a realization of what constitutes fact in medicine. Apparently the only hope is in education of the public so that people will be just as interested in reading about the human body and the manner in which it is built and functions as they are about airplanes, motor cars and radios. Let them learn the elementary facts about anatomy, physics and chemistry and other sciences so that they will not lend themselves so easily to exploitation of their ignorance by quackery. There will always be those who enjoy the spectacle of a miracle. Perhaps people suffering from mental disorders, who are not actually sick but only think themselves so, will continue to seek shrines, faith healers, psycho-analysts, and various forms of religious healing. But the man with a knowledge of bacteria and the way in which they cause diseases, who knows the futility of conjuring methods, who knows enough about chemistry, physiology and physics to see the fallacy of the claims of the charlatan is not going to spend his money in fraud when scientific medicine has something certain to offer.

There are enough wonders in science itself, in the mysterious powers of the glands of internal secretion, in the magnificent regulating system that controls the temperature of the body, the heart beat and the respiration; in the human eye, the most marvelous photographic device ever invented; in the brain, which sends impulses to other portions of the system that lead to action. These wonders, once understood, are far more miraculous than any of the things purveyed by the miracle monger—and they sell for less.

CERTAIN SPLENIC SYNDROMES WITH INDICATIONS FOR SPLENECTOMY*†

L. G. Bowers, *M. D.*
Dayton, Ohio

Probably no organ in the human body has intrigued the interest of the physiologist, the pathologist and the surgeon as has the spleen. The reason is not far to seek. The function of this organ has long been enshrouded in mystery. During the past two decades, however, important advances have been made in our knowledge of the physiology of the spleen. That it is not indispensable to the body economy is shown by its occasional congenital absence and by the fact that its surgical removal is entirely compatible with subsequent good health, reproductive ability and longevity. The literature abounds with records of cases in which the individual has enjoyed normal health for thirty or more years following splenectomy. One of our early experiences provides a case in point: A young woman, who developed an acute psychosis, attempted suicide with a shot gun. The charge destroyed the major portion of the spleen, the splenic flexure of the colon and the left kidney. The lacerated bowel was repaired and the spleen and left kidney were removed two hours following the injury. Convalescence was quite stormy during the first few days, after which she made an uneventful recovery. The psychosis subsequently disappeared and she has since given birth to four healthy normal children. Such observations lend no support to the old impression that extirpation of the spleen engenders lessened fertility—a myth which has not survived exposure to the light of more recent experimental and clinical knowledge.

---

†From the Dayton Clinic, Dayton, Ohio.
*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929. Invited Guest.

Function

The spleen is a most important member of that group of tissues which Landau and Aschoff have termed the reticulo-endothelial system. This apparatus includes also the Kupffer's stellate cells lining the liver sinusoids, the lining cells of the sinuses of the lymphnodes, the sinusoids of the bone marrow, the capillaries of the pituitary body and adrenal glands, and to a lesser degree all of the outlying endothelial tissues. The masterly work of Mann, in his experimental work on bile production, has shown that, following extirpation of the liver, bile was formed and red blood cells were phagocytized by the cells of the entire reticulo-endothelial system. It may be that we have here the explanation for the lack of any great disturbance to the economy of the organism following splenectomy, in that the spleen is only one part of the very extensive reticulo-endothelial system, and that part of its function at least can be rapidly assumed by the other members of the group.

Following experimental splenectomy in dogs, Pearce found that the lymphnodes showed a great increase in the number of endothelial cells, and in splenectomized dogs that succumbed to some hemolytic agent, the sinuses of the lymphnodes contained large numbers of endothelial cells filled with phagocytized red blood corpuscles.

Physiologists have long regarded the spleen as essentially "a graveyard for dead and dying red blood cells." Certainly the spleen is composed for the most part of specialized endothelial cells with extraordinary phagocytic powers, and in the severe anemias these phagocytes are seen to be filled with an excessive number of disintegrating red blood cells.

That these phagocytic cells may likewise be an important mechanism in the destruction of blood platelets seems to be indicated by the promptness with which the number of thrombocytes is restored to the normal level after splenectomy in cases of thrombocytopenic purpura hemorrhagica. A further function of these special cells is the engulfing of parasites, as is seen particularly in malaria. During fetal life, and in the course of certain severe anemias during adult life, the spleen, in common with the liver, is known to function as a member of the hematopoietic system, producing both red cells and neutrophilic polymorphonuclear leucocytes.

The spleen is also to be grouped with the lymphoid apparatus, because of the aggregations of lymphocytes in the splenic or Malpighian corpuscles. That lymphocytes are produced here simultaneously with their production in other members of this group is shown by the splenic lymphoid hyperplasia which coincides with that found in the lymphnodes, hemolymphnodes, Peyer's patches, tonsils and thymus in status lymphaticus and manifested in a perverted fashion in leukemia and lymphosarcoma.

The spleen is an important agent of defense against infection. In acute infections there is a characteristic and early hyperplasia. Hektoen has shown that antibodies are formed in the spleen.

Evidence is rapidly accumulating which seems to indicate that the spleen bears an important relationship to the intestine and liver in the digestive processes, and there is some reason to believe that the spleen may elaborate an internal secretion. These considerations, however, are as yet too conjectural to warrant emphasis.

In order that we might more fully appreciate some of the phenomena which follow extirpation of the spleen in the individual with splenic disease, we might briefly review the effects of the removal of the normal spleen in man and in the experimental animal. Pearce and Krumbhaar observed four prominent phenomena following splenectomy in dogs:

1. A mild and moderate transient anemia, which usually disappeared after three or four months.
2. An increased resistance of the red blood cells to hypotonic salt solutions and hemolytic agents.
3. A lessened tendency to hemoglobinuria and jaundice following the administration of hemolytic substances.
4. A sharp rise in the number of white blood cells (26,000 to 38,000) with a gradual decrease to normal after one to four months.

The importance of these experimental data

will become self-evident as we consider certain of the splenopathies in which splenectomy is the indicated treatment.

Surgical Considerations

The purpose of this paper is to discuss briefly the diagnostic features and the indications for splenectomy of three of the most important forms of splenopathy with anemia: namely, hemolytic jaundice, thrombocytopenic purpura hemorrhagica and Banti's disease.

Hemolytic Jaundice

Hemolytic jaundice may appear as the familial form, first described by Wilson and later by Minkowski, or as the acquired form, described by Hayem and Widal. The symptomatology of the two forms is essentially the same except that many of the familial cases run a longer and milder course. The familial type is by far the most common form of the disease, appearing about twice as often as the acquired form, and usually affecting two or more generations. The acquired form usually begins abruptly, and usually runs a more rapid and a more alarming course.

The acholuric type of jaundice, the anemia, and the splenomegaly constitute the important triad of clinical findings. The jaundice is not of the ordinary obstructive type, in that the stools are not clay-colored, and the urine is not bile-stained, even though there is a moderate increase of bile-pigment in the blood-serum; there is no pruritus and no bradycardia. Evidence of active hemolysis is to be found in the presence of urobilinuria. The red blood cells are not only diminished in number, often as low as 1,000,000, but they show a lessened resistance to hypotonic salt solution, or what is termed "increased fragility," and an increase in the number of reticulated red blood cells when vital staining is done. The small amount of bilirubin which is present in the blood-serum in hemolytic jaundice gives an indirect reaction with the van den Bergh quantitative method for the detection of serum bilirubin.

Hemolytic crises are not infrequent, particularly in the acquired form, with deepening of the jaundice, a sharp decrease in the number of red blood cells, with an increased number of reticulated red blood cells, and a marked increase in urobilin excretion. During this exacerbation of hemolytic activity, the spleen invariably increases in size.

Those cases of familial hemolytic jaundice which run a mild course, devoid of disabling crises, need no surgical treatment. But in the cases with sudden onset, and repeated severe crises, there is but one treatment—early splenectomy. Probably no surgical procedure is followed by such marvelously striking results. One whose skin has been icteric for years will develop a clear skin within a few days. The anemia improves quite rapidly, and the red blood cells take on increased resistance to hemolyzing agents.

Operation should be avoided during a crisis, and the "step-ladder" method of repeated transfusions is of the greatest possible value in the proper preparation of the patient for splenectomy. The operative mortality is not high, with but one death in thirty-two cases at the Mayo Clinic, and but two deaths in Kanavel's group of forty-one cases. Sir Berkley Moynihan has emphasized that a large proportion of cases of hemolytic jaundice are accompanied by cholelithiasis, and in every instance the bile passages should be investigated, and if calculi are found, drainage or removal should be carried out. Mayo found gall-stones in two-thirds of individuals operated upon for hemolytic jaundice, a large proportion of these occurring in young persons.

Pathologically, the deviations from the normal are not striking in this disease. The capsule may show patchy perisplenitis, and phagocytized red blood cells are usually seen in the endothelial cells lining the sinusoids with free hemosiderin deposits in the pulp substance. The blood sinuses are widely dilated and there is increased fibrosis. The Malpighian bodies are usually unchanged.

Thrombocytopenic Purpura Hemorrhagica

This disease derives its name from its most prominent distinguishing characteristic, namely, a remarkable reduction in the number of blood platelets. These ordinarily vary in number from 150,000 to 400,000 per cubic millimeter. In thrombocytopenic purpura they may number less than 10,000, or, in some cases, be entirely absent. As the number of platelets becomes diminished, certain

characteristic phenomena appear; the purpuric tendency manifests itself, the bleeding time becomes greatly prolonged, the clot which forms readily does not retract, and the spleen ordinarily becomes enlarged. Secondary anemia is a natural consequence, its seriousness depending upon the amount of previous hemorrhage.

This disease occurs most frequently in youth, often in childhood and occasionally in infancy. As in most of the blood diseases, the disease is further characterized by recrudescences and remissions. If the patient is seen during a remission, with only the history as a basis for suspecting this disease, the "capillary resistance test" of Hess, yields valuable information. It is carried out by applying a tourniquet to the arm for three to five minutes with the exertion of just enough pressure to obliterate venous return and not obstruct the arterial circulation. A shower of petechiae will usually appear in the skin below the point of constriction.

The hemorrhages are ordinarily petechial in character at first, with the subsequent development of oozing hemorrhages from the gums, nose, gastrointestinal and urinary tracts. The hemorrhagic tendency and the prolonged bleeding time may lead to a diagnosis of hemophilia. The sex-linked hereditary factor in hemophilia—its appearance in the male and its transmission by the female—is a most valuable point in the differentiation of the two diseases. Furthermore, in hemophilia, the clotting time is usually prolonged for hours, whereas in thrombocytopenic purpura coagulation occurs within four to six minutes, but contraction and exudation of the serum does not take place. In hemophilia, the number of platelets ranges within normal limits.

Wright and others have shown quite convincingly that the platelets originate from the megacaryocytes of the bone marrow. That the platelets provide a substance which promotes coagulation is generally accepted. Howell refers to this as a "thromboplastic substance." Considerable discussion has arisen as to whether or not the diminution in platelets is the result of decreased production by the bone marrow giant cells, or whether they are produced in normal number but are rapidly destroyed. The observations that the number of platelets is greatly increased by splenectomy and that the reticulo-endothelial cells of spleens removed in cases of thrombocytopenic purpura are found to contain a great excess of phagocytized platelets, lend support to the theory that there is no diminution in the platelet-forming activity of the magacaryocytes, but that they are destroyed in excessive numbers by the spleen, and, probably to a lesser degree, by other members of the reticulo-endothelial apparatus.

Splenomegaly is not an essential feature of this disease, although palpable enlargement has occurred in most of the cases appearing in the literature. When it is recalled that the spleen must be increased in size from two to three times its normal dimensions before it becomes palpable, it becomes apparent that moderate splenic enlargements are easily overlooked during physical examination.

There is no doubt but that splenectomy is the treatment of choice in proved cases of thrombocytopenic purpura hemorrhagica. All known hemostatics are of no avail in arresting the hemorrhages, and many cases will terminate fatally unless the spleen is removed. With proper preoperative treatment, the operative mortality is not high. Clopton recently gathered together forty-five cases, of which twenty-seven were well, fifteen definitely improved, one unimproved, with two operative deaths.

Transfusions have been of great value as a supportive measure preliminary to operation, but their beneficial effect is fleeting. The use of repeated transfusions as a curative measure has not yielded encouraging results.

Outside of moderate fibrosis, an increase in the number of large, pale reticulo-endothelial cells, often filled with disintegrating red blood cells and an excessive number of platelets, increased number of leucocytes, and scattered deposits of hemosiderin in the pulp substance, the histopathologic studies of the spleen in this disease reveal very little essential deviation from the normal.

Banti's Disease

There is a growing belief among some pathologists and surgeons that the number

of cases of Banti's disease steadily decreases as one acquires the ability to establish definite etiological factors in cases of splenomegaly with anemia. The terms "Banti's disease" and "splenic anemia" have long been used interchangeably. We now recognize may separate disease entities which were originally grouped with the splenic anemias, such as Gaucher's disease and von Jaksch's disease. Hemolytic jaundice was originally considered to be a member of this group. Likewise, many cases which have been regarded clinically as examples of Banti's disease, were later found, after careful pathological studies, to be cases of syphilitic splenitis or tuberculous splenitis or malarial splenomegaly or splenic neoplasm. In three of our cases in which the preoperative diagnosis was Banti's disease, exploration revealed the typical *hepar lobatum* of syphilitic hepatitis. In accordance with Banti's original description of the disease which bears his name, only those cases in which the etiology cannot be established can be considered as examples of Banti's disease. It may develop that the term Banti's disease will gradually disappear from medical terminology as we acquire the ability to assign definite etiology to the various splenopathies.

As described by Banti, the disease usually effects young or middle-aged people. It pursues a long, chronic course, and following the example set forth in Banti's original description, the symptomatology of the disease is usually divided into three periods. The first period usually extends over several years, and is characterized by slowly progressive splenic enlargement with gradually increasing pallor and weakness. Anemia of the secondary or chlorotic type is usually present. The red blood cells rarely fall below 2,000,000, and a moderate leucopenia is the rule.

The second period lasts a much shorter time, possibly four to six months. The liver increases somewhat in size and there is an excess of urobilin in the scanty, highly-colored urine, indicating blood destruction. Indigestion and diarrhea are common complaints in this stage. The hemorrhagic tendency usually manifests itself during this period. Hematemesis is common, originating from varices of the esophageal and gastric vessels. Melaena, hematuria, epistaxis and purpura are frequent occurrences.

In the third stage, the symptoms and signs are those of portal cirrhosis, with ascites, diminution in the size of the liver, hematemesis, and an increasing anemia and emaciation. A copious hemorrhage or intercurrent infection usually closes the scene.

There is but one treatment—splenectomy. Naturally, this yields the most gratifying results in the early stages, before the development of the hepatic changes.

The operation is never an emergency one. Transfusions play a most important role in the preparation of the patient for operation. Immediately following splenectomy the organ should be drained of its blood, treated with sodium citrate, and auto-transfusion performed at the end of the operation. By this simple procedure, from 400 cc. to a liter of blood can be restored to the patient. We have found this to be a most valuable adjunct.

The operative mortality is, of course, greater in the later stages, and only the fact that without splenectomy the disease will go on to its inevitable fatal outcome justifies any such consideration. To quote Mayo: "The fact that most of the patients with advanced splenic anemia made a permanent recovery makes it difficult for the conscientious surgeon to refuse to operate, even in the terminal stages of the disease, if, after careful explanation, the patient decides to accept the risk."

As regards the pathology of the spleen in this disease, there is invariably a diffuse fibrosis, often almost entirely replacing the Malpighian bodies and the splenic pulp cells. The capsule is greatly thickened, with firm adhesions to surrounding structures. The splenic vessels are usually sclerotic. Macrophages and an increase in the amount of hemosiderin give evidence of blood destruction. In the advanced cases the liver shows the characteristic changes of portal cirrhosis.

Summary and Conclusions

1. The past two decades have witnessed important advances in our knowledge of the physiology of the spleen. Recent experimen-

tal work has demonstrated that the spleen is an important member of the group of reticulo-endothelial tissues. The specialized endothelial phagocytes of the spleen probably play a major role in the destruction of blood platelets.

2. The diagnostic criteria of the three important splenopathies with anemia—hemolytic jaundice, thrombocytopenic purpura hemorrhagica and Banti's disease—are discussed, together with the indications for splenectomy.

3. Experience has taught us that preoperative transfusion is an almost imperative adjunct to the treatment of the splenopathies discussed herewith.

4. Splenectomy offers the greatest hope for improvement or cure in cases of hemolytic jaundice, thrombocytopenic purpura hemorrhagica and Banti's disease.

5. The diagnosis of Banti's disease is to be made only after a diligent effort has been made to assign a definite etiology to the splenopathy. The number of cases in which a diagnosis of Banti's disease can be sustained is declining, as a result of the introduction of more accurate diagnostic procedures.

ADDRESS OF PRESIDENT-ELECT*

WILLIAM R. DANCY, M.D.
Savannah

There was a distinct innovation made by the Medical Association of Georgia, at its last annual meeting, in May, 1928, in that it elected a President-Elect for the first time in its history. You were kind enough to honor me with this distinction, one which was deeply appreciated.

Council has considered it advisable that the President-Elect, on the threshhold of assuming the presidency, should address you, relating some deductions of his apprenticeship and outlining certain policies which he expects to advocate.

Soon after his election the President-Elect began to investigate in order to ascertain the duties of the office. There were no precedents; no rules to guide him. The by-laws did not "contain the President-Elect." He found himself a free lance, so to speak. This was somewhat disconcerting to the officers and Council. They did not know just what to do with this embryonic President. It was a question as to what task could be given him and if a task were found, what authority did Council have to impose it upon him.

On the other hand, with duties undefined, the President-Elect experienced the feeling that he was just outside of the closed door of the executive bodies and not qualified to enter.

This latter situation however was promptly remedied by a ruling of the parlimentarian to the effect that the President-Elect was a member of Council, otherwise than this the President-Elect was left free of exacting duties, the desire being expressed that he become acquainted with the duties of the Presidency.

You would probably be interested to know what the President-Elect, after serving a year in that office, thinks of this new policy of the Association and what additional duties, if any, should be placed on this officer.

As a result of this innovation the President-Elect, by reason of his office, knowing that he is to succeed to the Presidency, becomes vitally interested in investigating and studying the paramount issues of the Association. He will prepare himself as well as he can for the future problems, he must help solve, and will become more oriented in the routine duties of the Presidency. Having learned much about the Association's work during this apprenticeship, your President-Elect feels that he might be of some real service to the organization, whereas, if he should have entered the Presidency without this insight into its most important affairs, he is quite certain that his tenure of office would have been of much less value, regardless of how earnest he might have been in his endeavors.

It should be stated here, and with a sense of gratitude, that your President, your Council, and your Secretary have accorded me every opportunity and courtesy, relative to acquiring a working knowledge of our Association.

Concerning the duties which should be

*Address before the House of Delegates of the Medical Association of Georgia, Macon, Ga., May 7, 1929.

required of the President-Elect, it is advised that they be very few, only those that would tend to educate him in the work of the Association, otherwise he should be free to develop himself for the great work which lies before him. Later reference will be made to specific duties for the President-Elect.

Hence, it appears to me that you have acted most wisely in adopting the plan of selecting a President-Elect a year in advance of his taking office.

On the threshold of assuming the Presidency may it be said that it is my expressed wish that the approaching administration be characterized, by a spirit of progressiveness coupled with cooperation in all departments; the suppression of individuality; unselfish, persistent work for our organization on the highest plane of human and medical endeavor. Personal ambitions, selfish efforts, petty jealousies and subtle discontent should be submerged in a maturing freshness of the thought of cordial relationship and genuine service.

You and those whom you represent can be of great assistance to the officers, by lending them your moral support and by doing all that is expected of you in the House of Delegates and in your local societies and districts.

With every component unit striving for the objectives set forth by your officers and Council, the greatest benefit will result for our entire membership.

The Medical Association of Georgia, it seems to me, has reached a critical stage in its existence. Its financial plan which is vital, must be altered; the health conditions of the State demand its advice and support; essential legislation requires its services; protection against blackmail needs its consideration. Its service to the profession of the State and in keeping progress with the ever onward aggressiveness of medicine, are additional fields of its work.

It has to be alert. It must be active. It requires the best that is in you to carry it on and it calls for more aid from its membership to assist in its undertakings which are growing greater and more far reaching every year.

Your cooperative spirit is anticipated. The officers and Council have a right to expect your help. We are certain you will not fail in your duty. With the forces of the organization united and working together for the objectives set down by its officers and Council, we may expect to emerge at the end of the year with our problems settled, and our efforts crowned with success.

Before concluding this address reference will be briefly made to those things which your President-Elect would submit as being most vital for your consideration.

Scientific Work

The Committee in charge of the Scientific work and program of this Association, has, during the past few years developed the Scientific Session at our Annual Conventions, so that they are not only well rounded, entertaining and of high scientific value, but they compare most favorably with those of the best Medical Associations of the Country. The dry clinic feature has been very highly commented upon. The distribution of essays throughout the State is heartily approved. There has been a steady disappearance of the apathy relative to essays which existed a few years ago.

The Scientific Sessions have been made more interesting by the addresses of distinguished invited guests. One invited by the Medical Association and one by the Abner Wellborn Calhoun Lectureship. This custom should not only continue but the number of men of eminence who visit as guests on these occasions should be increased. We trust that the Association will soon find a means whereby it can invite at least two distinguished guests annually and that the Calhoun Lectureship will be able to do likewise.

It seems to me that the committee would do well to let it be generally known that essays with lantern slides, specimens, x-ray films, pictures, charts, diagrams and other visual explanatory features are more acceptable than plain didactic essays. The audience would be held by greater interest and the impressions would be more lasting.

A strict adherence to the time limit for the essayist and the one discussing the essay, is earnestly advocated.

Basic Science Law

This law is designed to elevate the standard of those practicing the healing art and does not work a hardship on any one. The spirit of it is to provide for the public, practitioners who, at least, have a fundamental knowledge of the basic sciences.

As many do not know the Basic Science Law I shall read a few extracts from it which include the essentials of this law.

"An Act to establish a State Board of Examiners in the Basic Sciences underlying the practice of the healing art, to provide that certification by such board be a prerequisite to eligibility for examination for license to practice the healing art and to define healing art, and to repeal all laws and parts of laws in conflict with this Act."

"Section I. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same that, from and after January 1, 1930, no person shall be eligible for examination or permitted to take an examination for a license to practice the healing art of any branch thereof; or granted any such license, unless he has presented to the licensing board or officer, empowered to issue such a license, a certificate of ability in anatomy, physiology, chemistry, bacteriology and pathology (hereinafter referred to as the basic science) issued by the State Board of Examiners in the Basic Sciences."

"Section 7. Be it further enacted by the authority aforesaid that, no certificate shall be issued by the State Board of Examiners in the Basic Sciences unless the person applying for a certificate submits evidence satisfactory to the board: (1) That he is a person of good moral character; (2) That he was graduated by an accredited high school or school of similar grade, or possessed educational qualifications equivalent to those required for graduation by such an accredited high school, before he began the study of the healing art; (3) That he is not less than 21 years of age; and (4) That he has a comprehensive knowledge of the Basic Sciences as shown by passing the examination given by the board, as by this Act required."

This act is more essential to the welfare of the citizens of Georgia than are its paved highways. It is in the line of progress in the elevation of standard and is endorsed by the best people of the state regardless of profession or occupation.

The Medical Association of Georgia acting through its officers and through its able Committee on Public Policy and Legislation must and does stand squarely behind it, and you are hereby urged to exert every legitimate effort within your power to aid the passage of this law.

The Health Program

The Health program of the Board of Health of the State of Georgia is a subject in which we are deeply interested and we shall cooperate most earnestly with it, by doing all that is possible, to promote improvement in health matters and to assist where we can in effecting proper legislation for the benefit of health and the appropriation of funds for its work.

However, in these days where State Medicine is making inroads into the profession certain conditions must, to a degree, affect our unqualified endorsement of the Board of Health and its operations. This Association should not stand for any imposition on our medical rights. The Board of Health is organized primarily for the development of proper living and prevention of disease. Not the treatment of disease. The exception to the latter is noted in the free clinics run by local authorities (indirectly under the Board of Health organization). They impose on the profession by treating many patients who can otherwise pay. The City Health departments administer large amounts of serums, vaccines, etc., free of charge to people able to pay, and thereby prevent some young physicians from making fees which they so much need. These are abuses which can readily be corrected and it is recommended that the House of Delegates direct the attentions of the proper authorities to them.

Periodic Health Examinations

This would necessarily come under the Health Program of this Association. It is a procedure which this body should consistently endorse. It is advocated by the American Medical Association and is being prac-

ticed throughout the United States. It should be urged by the membership of our county societies, because they are in close touch with the people. As these examinations are advised yearly, records should be kept for comparative purposes. You should be reminded that the committee on Public Health and Instruction has devised a standard blank which the Medical Association of Georgia has adopted and recommends for use by the physicians of the State. This blank covers the minimum examination that should be made. If the patient can afford it, additional laboratory work, and x-ray work should be done.

These examinations should be done with the greatest care, so that nothing will occur to reflect on the profession, and a uniform charge should be made for them.

An Organization for Medical Relief In Disaster

The American Medical Association, at its Dallas Convention in June, 1926, advocated the formation of an organization for "Medical Relief in Disaster." It is not necessary to speak at length on this as the name is self-explanatory.

The intention is to furnish in cooperation with the Red Cross or constituted authority immediate medical relief, in any great calamity which might befall any section of our State. This organization, or its representative, would function only until the properly constituted authorities or other recognized State or National organizations arrived to take charge. It is not intended that this organization shall take permanent charge or that it shall take over the functions of the bodies provided by the State and Federal Governments including the Red Cross. If it is desired that this organization continue its work after the Red Cross, etc., arrive this organization will work under the constituted authority.

However, it is not the function of this Medical Relief organization to take charge of railroad disaster or other industrial disaster where the corporation has its own organization. It is in no way to conflict with other organizations prepared to do the work.

The plan recommended by the American Medical Association is to have as State head of the Medical Relief, the President of the State Medical Association. Under him will be the Presidents of the County Medical Societies who will have direct charge of the work in their respective counties. The President of the County Society will select his own group of workers and work in accordance with rulings laid down by the *American Medical Association.*

If there be no stated objection to forming a Medical Relief Organization in Georgia, the incoming President will form such an organization in accordance with the American Medical Association plan.

The many disasters which have befallen our State in the recent past definitely demand such an organization as the American Medical Association has proposed.

I attach a copy of the American Medical Association's report for details.

The Crawford W. Long Memorial Prize
The Abner Wellborn Calhoun Lectureship

Fortunate indeed is the Medical Association which has been presented with two such gifts. You will recall that the Crawford W. Long Memorial Prize is the gift of a most generous donor, one interested in the advancement of original work in medicine. It is offered annually for the best original essay in medicine delivered by a member of this Association at the annual convention. The Abner Wellborn Calhoun Lectureship consists of a fund subscribed by physicians and friends of the profession. Every year an eminent physician is invited at the expense of this fund, to deliver the major address at our convention.

These two gifts are not being fully appreciated and patronized by the profession of Georgia. You are advised of this situation in order that you might stimulate an interest in these among the membership within your jurisdiction.

Medical Defense

This Association carries for the benefit of its members, who have paid their dues before April 1st of the current year, a medical defense which protects a member against attorney's fees and court costs in case of suit (the cost of this is included in the annual $5.00 dues). It does not protect him against

damages, if he should lose the suit. Because the Association does not protect its members against damage, a large proportion of its membership carry their own individual policies in independent companies.

The Secretary of our Association has advised that if our Association continues to bear the same expenses as at present it will exhaust all of its surplus in two years, and will be compelled to go in debt. This is poor business. It is imperative that active and radical steps be taken to rehabilitate the treasury and to place the organization on a sound financial and business basis. We must immediately increase our income or lower our expenses. In this connection I am advised by the Secretary that between one-fourth and one-third of all funds collected by our Association are expended for Medical Defense. For prompt results two alternate propositions present themselves. We can retain Medical Defense as it is, which will necessitate raising dues $2.00 to $3.00 each year for three years, meaning that at the end of three years dues will be between $12.00 and $15.00, or

We can eliminate Medical Defense as now carried (which covers only attorney's fees and court costs at most) and raise the dues nominally, so that at the end of three years the dues will be about eight dollars per year without Medical Defense.

If the latter plan is adopted and the present Medical Defense eliminated, it is advised that the Medical Association of Georgia take a group policy, which would have three options: One policy covering attorney's fees and court costs only; one policy covering attorney's fees and court costs and five thousand dollars damage; and a third covering attorney's fees and court costs and ten thousand dollars damage. The premiums would be:

Approximately $15 premium per year for the first.

Approximately $18 premium per year for the second.

Approximately $20 premium per year for the third.

and would be paid by the respective individual members. The fact that the policy is taken through the Medical Association would lend support and prestige in case of suit. These premiums are about 30 per cent less than if insurance is taken singly from outside agencies. This insurance would not be obligatory.

You are most earnestly urged to consider the finances of the organization, to advise relative to Medical Defense, to adjusting the dues to meet the needs, and finally to adopt a plan for conducting the Association in a more successful business like manner, both physically and financially.

Woman's Auxiliary

As this Auxiliary was primarily organized to aid the medical profession in carrying out some of its projects or plans, it would seem incumbent upon us to suggest work for them which would be interesting to them, worthy of their endeavors and helpful to the Medical profession.

Such a plan occurs to me which will be submitted to them in detail during this convention. With your indulgence it will be omitted here.

Membership Campaign

The by-laws require every Councilor to make and submit to Council a list of all physicians in his district, including all members of the Medical Society or Societies of that district, also those not in practice and those not members of the Medical Societies.

It is recommended that an earnest effort be made to increase our membership to the maximum by having each Councilor make an early report to the President, Council and the Secretary in keeping with the above by-law. The report should give the reason why the individual physician is not a member. State whether the Councilor and others have seen the non-members and why they do not join. Then concentrated influence can be brought to bear upon him to induce a favorable result.

County Hospitals

It is recommended that this Association start a movement whereby each county in this state will be provided with a hospital or hospital facilities. In those counties which are poorly settled and whose incomes are limited, two or more counties may combine to

erect a hospital to care for their inhabitants (just as a similar plan is worked for a health officer). It would be imposing on your time to tell you of the great benefit of such institutions. As to how these hospitals should be built and financed and as to what plan should be adopted to spread the propaganda, all this may be left to a committee appointed by your honorable body.

This is a plan that cannot be accomplished in one administration. It is the work of years, of constantly moulding the thought of the people, so that in the coming year we can hope for but little more than judiciously advising the people of the plan in the hope that some of the ideas expressed will fall on fertile ground, take root and grow.

An Act to Establish As Confidential the Relationship Between Physician and Patient

For years the legal fraternity has operated under such a law. The necessity for such an act to cover the confidential features of the relationship between physician and patient so worded that the physician would not be compelled in court or elsewhere to divulge what confidential knowledge he may have, is imperative. This act should be so broad in its scope that it will protect laboratories, hospitals or any institutions from being compelled to relate or divulge any information concerning an individual patient or inmate. You will find appended the law as it exists relative to the confidential nature of information between lawyers and clients.

At the present, in Georgia, there is no law which protects a physician from giving any information asked in court about a patient, nor are the records of city and private laboratories protected against investigation by any one desiring to obtain information from them. Your President-Elect has consulted several eminent lawyers relative to the existance of a law establishing, as confidential the information existing between physician and patient, and they were a unit in stating such a law did not exist.

It is recommended that your body take this subject under advisement and act promptly on it, that a suitable law may be passed at the present legislature.

The President-Elect

This officer as mentioned was a new member of the official staff of officers during the past year. The first President-Elect having been elected at the last annual meeting in Savannah, May, 1928. His duties, if he has any, and his standing in the Councils of the organization have never been satisfactorily determined. It would seem to me wise for the Council of this organization to *request* him to attend all district medical meetings, and to this end that all District Medical Societies be instructed to officially invite the President-Elect to attend.

The President-Elect's status in the Council and in the House of Delegates should be determined and incorporated in a by-law. It is recommended that he be made an ex-officio member of the Committee on Public Policy and Legislation (by-law). As this is a most important committee, it will give him a splendid insight into the work or at least an important part of it, as conducted by the Association. This might be also incorporated in the form of a by-law.

There are many other duties which could be placed upon him from time to time, in order to better fit him, by way of preliminary tutelage, for the Presidency. In this connection it occurs to me that when it is impossible for the President or Vice-President to be present at some worthwhile function, the President-Elect might be invited to attend, representing the Association, and when Fraternal Delegates are sent each year to represent our Association at the annual conventions of the State Medical Associations of Florida, South Carolina, Alabama, etc., it would be well to appoint him (President-Elect) as one of these delegates in order that he observe the methods of other Associations.

The plan of having the President-Elect deliver an inaugural address, outlining his policies for the ensuing year, is an excellent procedure, causing him to mature the thoughts and material which he might have assimilated during the year of observation as President-Elect.

Relative to the President-Elect, your attention is directed to page 7 of the constitution and by-laws for the State Associa-

tion, as prepared by a special committee of the House of Delegates of the American Medical Association 1925. "That the President . . . may be designated as the presiding officer of the House of Delegates, that the President-Elect or a Vice-President shall preside over the general meeting in the absence of the President at Council.

"Section 2. The President-Elect shall be a member of the Council ex-officio, shall act for the President in his absence or disability. If the office of President should become vacant the President-Elect shall succeed to the presidency."

You have been presented with certain concrete ideas and appraised of certain observations with the hope that a fair consideration of these might redound to the benefit of our Association. It is my desire that you study these and from this study mould a line of constructive thought and work to meet the ever changing conditions and requirements which confront us in order that the best interests of the Association might be conserved.

PRESIDENT'S REPORT TO THE HOUSE OF DELEGATES*

C. K. SHARP, M.D.
Arlington

My term as your President has been a benediction to me and the experience gained by my service has convinced me of the inestimable value of organized medicine to the profession generally. We may well boast of one of the best and most systematically organized of any of the units in the great galaxy of states composing the American Medical Association, and I feel that its influence is growing more and more each year in promoting our professional and may I add, material welfare, and if we will regard its precepts and put into practice its ideals it has always advocated, it can not but result in that professional unity, cooperation, and practical efficiency so much desired.

It has been my privilege and pleasure to visit all of the District Societies. Have visited several County Societies on invitation and find throughout a growing comradaire that serves so well in lightening our professional burdens. As educational institutions the various Medical Organizations play no insignificant part and the small amount of dues exacted is a mere pittance compared to the substantial value received.

We are fortunate in having our committees filled with men of vision and unselfish devotion to the tasks set before them. They have labored faultlessly, thus accounting for the smooth functioning of the machinery of our organization.

Again, we are fortunate in having Dr. M. A. Clark the best and most hard-boiled of any Parliamentarian I dare say, in the nation, to steer us clear of the rocks of errors and irregularities while in the pursuit of our various duties.

In my talks before the District Societies I have stressed the necessity of the passage of the Basic Science Law, which if passed by the next legislature, will safeguard the public against unqualified practitioners and insure decent medicine in the future. Some degree of interest has been manifested and with the work that has been done and will be done the few remaining days before the meeting of the legislature, I see no reason why this measure should not become a law.

I have responded to all requests from civic bodies for talks along the line of public health and hygienic living and found that these talks were received kindly and showed that the public is eager for information concerning healthful living and disease prevention. I have recommended Hygeia as a dependable periodical for their guidance in health matters.

In view of the fact that our dues will of necessity have to be raised, it is probable that a large number of the members will drop out, especially in the rural sections. Feeling that some means should be adopted to stimulate membership as a result of this raise of dues, I want to submit the following recommendation:

That we establish an office in the Association to be known as State Organizer, or, some such name, whose duties it shall be to go into Counties and Districts on invitation

*Report to the House of Delegates, Macon, Ga., May 7, 1929.

from officers or members of organizations desiring his services, or, shall go into counties and districts that are not organized, for the purpose of bringing the men together and establishing enthusiasm for organized medicine, showing them the necessity of active participation in these affairs. His expenses of course to be paid by the Association. An officer of this kind will, I feel, be much needed and will repay the Association well on account of this service. We have men in the Association especially gifted in this line of work.

Recently there was a meeting in Albany, over which I presided, for the adoption of ways and means for the control of malaria in Georgia, a disease that is keeping Georgia back from an industrial standpoint more than any other factor, and I feel that much was accomplished. As a result of this meeting Dougherty County has appropriated an ample sum for the carrying out of plans for countywide malaria eradication suggested by Dr. L. L. Williams, Assistant Surgeon General U. S. P. H. S. The result of this campaign will be watched with interest by every Georgian, particularly those residing in the lower half of the state.

There was recently a joint meeting of Council in Macon, with heads of the various women's organizations, namely: P.-T. A., Women's Clubs, W. C. T. U., Women's Auxiliary to Medical Association of Georgia, State Nurses Association and others, with a report from Dr. Abercrombie as to the State Board of Health program; also the committees on P. P. and L. and H. and P. I. There was shown a deep interest in matters of vital importance to the Association, and to the public. Hearty cooperation of all these bodies was assured the Association, which is potentially capable of accomplishing much.

In conclusion, I want to express my sincere appreciation to our efficient and beloved Secretary, Dr. Allen H. Bunce, for his valued assistance without which it would have been next to impossible for me to have functioned as your President, and to the officers and members generally for their kind and sympathetic consideration. I shall always love them and cherish them in my memory.

ADDRESS BEFORE THE WOMAN'S AUXILIARY*

William R. Dancy, M.D.
Savannah

In addressing you today I feel very much as if I were talking within the family, for all of you are wives of the physicians of our State Medical organization. Furthermore it has been my pleasure to have continued in close touch with your organization since it came into being in this State and have been associated with others in forming some of your county organizations. Hence you can appreciate my deep interest in you. The Woman's Auxiliary has always appeared to me as being the greatest potential aid that our Association has, formed as it is of a superior, intelligent, well educated and active personnel. I am sincere when I tell you I am thoroughly convinced of the capabilities of the Woman's Auxiliary to the Medical Association. You have given conclusive evidence of this in the excellent local work done by some of your units, namely the Fulton County, the Chatham County, the Richmond County, the Randolph County, the Clarke County, and other County Auxiliaries. The efforts of you good women have been characterized by a most unselfish spirit.

The various works accomplished are certainly very laudable, but, as several of your officers have pointed out to me, the efforts of the Association are not centered on any one great undertaking, are not specific in its objectives. Since you have such remarkable capabilities, have a store of such wonderful unused energy, and are so ready and willing to work, I deem it my official duty, and indeed a pleasure to indicate to you a great purpose, a worthy work, to which you should devote your ambitious energies, and thereby make it your goal—your Association's real objective. But before inviting your attention to the real subject of this address, I wish to read to you by way of introduction of my plan a poem, entitled "Home," by Edgar A. Guest.

*Address delivered before the Woman's Auxiliary, Macon, Ga., May 8, 1929.

"HOME"

It takes a heap o' livin' in a house t' make it home,
A heap o' sun an' shadder, an' ye sometimes have t' roam.
Afore ye really 'preciate the things ye lef' behind,
An' hunger fer 'em somehow, with 'em allus on yer mind.
It don't make any differunce how rich ye get t' be,
How much yer chairs an' tables cost, how great yer luxury;
It ain't home t' ye, though it be the palace of a king,
Until somehow yer soul is sort o' wrapped 'round everything.

Home ain't a place that gold can buy or get up in a minute;
Afore it's home there's got t' be some babies born, and then
Right there ye've got t' bring 'em up t' women good, and men;
And gradjerly, as times goes on, ye find ye would't part
With anything they ever used—they've grown into yer heart;
The old high-chairs, the playthings, too, the little shoes they wore.
Ye hoard; an' if ye could ye'd keep the thumb-marks on the door.

Ye've got t' weep t' make it home, ye've got t' sit an' sigh.
An' watch beside a loved one's bed, an' know that Death is nigh;
An' in the stillness o' the night t' see Death's angel come,
An' close the eyes o' her that smiled, an' leave her sweet voice dumb
Fer these are scenes that grip the heart, an' when yer tears are dried,
Ye find the home is dearer than it was, an' sanctified;
An' tuggin' at ye always are the pleasant memories
O' her that was an' is no more—ye can't escape from these.
Ye've got t' sing an' dance fer years, ye've got t' romp and play,
An' learn t' love the things ye have by usin' 'em each day;
Even the roses 'round the porch must blossom year by year,
Afore they 'come a part o' ye, suggestin' someone dear,
Who used t' love 'em long ago, an' trained 'em jes' t' run
The way they do, so's they would get the early mornin's sun;
Ye've got t' love each brick an' stone from celler up t' dome;
It takes a heap o' livin' in a house t' make it home.

I have just read you this most inspiring poem, The Home, with its many tender references. Reflect a moment. Picture a handsome fellow of eighteen to twenty, in the bloom of youth, standing at the threshold, yes, the threshold of life, of his career, as well as of his home. He glances back at the toys and surroundings of his childhood. He recalls the happiness of many associations. The old plow horse strolls slowly by to the trough for water, the old cow bellows in the pasture, the chickens peck here and there about the yard, the faithful old setter dog, a happy companion of many hunts, licks his master's hand; and gazing from a nearby settee the proud and aged parents admire their splendid boy. He turns from these, outward and gazes upon the world. It is his to conquer. What has it in store for him? What is his preparation? What are the weapons he has that are his with which to do battle? In a word what is his preparedness?

He is strong. He is determined. He is ambitious. He has character. He has a good high school education and best of all a fond mother's training. These indicate a good foundation. But though a willing worker, he is without the instruments for endeavor, without the training in a trade or profession. How pitiful to find just this final element of his composition lacking, his training incomplete. Just the lack of the spark to set a great mechanism in operation.

There are many such upright, deserving ambitious young men in this state who could

occupy the central figure in this modest picture which I have presented.

It is concerning these that I come before you today, and I bring you the message that you and I are going to help at least some of these young men. We are going to educate them to become doctors of medicine and as such, builders of homes of their own and to help in adding happiness in the homes of others by their professional work. And thus the plan unfolds.

The prime object of the Woman's Auxilliary is, as I understand it, to perform some worthy service in the field of medicine, approved and advocated by the Medical Association.

It is my pleasure, as incoming President of the Medical Association of Georgia to advocate as your chief objective the plan of educating the Georgia youth in medicine. Indeed a worthy task. In what field could your efforts be more beneficially spent? It affords your organization the rare opportunity of having a distinctive work, one which will forever be identified with it and one which will lend to yourselves individually the satisfaction of a worthy work well done.

This is the plan which I wish to outline to you: The youth will be sent to a medical school (college) and the tuition and living expenses paid by the Woman's Auxiliary.

This simple sentence plain as it may seem, immediately excites many inquiries.

For instance:

(1) What kind of a youth is eligible?

He must be white and a son of Georgia parentage, and unable otherwise to obtain funds for medical school instruction.

(2) What age?

Seventeen to twenty-five.

(3) What education?

He must have a high school education or its equivalent (sufficient to satisfy the committee) (advice medical school).

(4) What character?

He must be of splendid character and good reputation, and interested in obtaining an education in medicine.

(5) Will the money be given him or will it be loaned?

One appreciates most of all that for which he works. The money will be loaned to the student on his notes at a stated interest rate. He will repay this money, plus interest as soon after he begins to make money as possible. It may occur to the Auxiliary that it would not wish to make interest out of the young men. If so, then it could make the offer as follows: If the student completes his four years course in medicine, the amount required by him for his first year will be donated to him and he will be expected to pay back only the amounts loaned him during the latter three years, plus interest. This interest will be figured as making up the first year's indebtedness and is necessary to compel the student to realize his increasing obligation and the advantage of paying up his debt as soon as possible.

(6) What amounts should be loaned to each student?

He may be loaned all or part of the money necessary for railroad expenses to medical college, matriculation fees, tuition, costs of books, instruments, etc., board, specific expenses while in post graduate hospital work and also sufficient to fit his office for the practice of medicine and any other amounts indicated by action of the Auxiliary. The actual amounts loaned would rest with the committee who would make the necessary inquiries to ascertain various costs and expenses.

(7) How and in what order shall the students be selected?

They shall be selected by the committee of the Woman's Auxiliary in accordance with rules and requirements they will adopt, and if desired, may request the cooperation of the advisory committee of the Medical Association of Georgia.

The students should be selected from the districts in order of the numbers of the districts. If for instance there are three students to be selected, they should be selected from the first, second and third congressional districts of Georgia. If one or more of these districts cannot present a satisfactory applicant then the fourth, and possibly the fifth and so on districts would be called upon to present applicants. After the twelfth district then would come the first district again.

It is hoped that within a few years, one

student from each district may be sent to each of the two great Medical Schools of Georgia.

(8) What schools can he attend?

The student must attend the medical school of Emory University, Atlanta, the Medical School of the University of Georgia, Augusta, or any Medical School in the State of Georgia, recognized by the Medical Association of Georgia. The Woman's Auxiliary may alternate the assignments of students, first to one school then to the other, so as to equally distribute them.

(9) After graduation where can he practice?

The loan will be conditional upon his practicing medicine, within the state of Georgia until the indebtedness is repaid, and then he would be requested to practice in this State, as such is the spirit of the plan of educating him.

(10) Will the funds be used for specialization?

No, at least not at present, as it is desired that the funds be used where most good can be expected, and the education of the general practitioner will help more men to become physicians, this means more people will have improved medical attention.

(11) Whence is the money coming for this great work?

From that splendid organization, the Woman's Auxiliary to the Medical Association of Georgia.

(12) How will they get it?

(a) By subscription (donations) which may be solicited from various sources.

(b) By the results of their own labors (not from the Medical Societies or Association.)

(13) This is a work of the Woman's Auxiliary exclusively. The Medical Associate and its component societies are not to be called upon for financial assistance. They will otherwise support you.

It is proposed that the Woman's Auxiliary shall map out its work and program along the general lines suggested, and that it appoint a Board or Committee from their organization to handle the matter, and also request a committee from the Medical Association of Georgia with the President as a member, to act in an advisory capacity.

It is further urged that organization of this be effected as rapidly as possible, so that several students can be sent to the Medical Schools in September next.

The necessity for this work is two fold; First, ambitious Georgia boys need this educational opportunity and second, Georgia, especially in the rural districts, is sadly in need of physicians. There are two hundred fewer physicians in Georgia now than two years ago. There are many of us still, but far too few for the demands of the people. We must look to the future and be prepared to supply the needs of suffering humanity.

It is the hope of the President of the Medical Association of Georgia, that this thought and plan for the education in Medicine of Georgia's worthy sons, will meet with the enthusiastic approval and hearty endorsement of your worthy body.

And that you will promote it with the vigor and intelligence of which you are supremely capable, thereby performing a distinctive work and rendering a valuable service to your State and its people.

If I had money, to be sure,
I'd like to place it where it would be most secure . . .
And I might store it back of bolts and locks,
I might invest it in fine bonds and stocks,
I might set it to work in factories and mills
And make it serve; in farms upon the fertile hills
And in the richer valleys I might give
It all away or waste it. For a fortune now to live
And yield the greatest interest of joy
And pride and love—I'd put it in a—Boy.

And if I had no money to invest
I'd give my time and talent, all the rest
Of what I have to this: Employ
It will to help some worthy—Boy.

EMORY MEDICAL ALUMNI CLINIC WEEK will be held June 3rd to 7th, inclusive. Program is published in this issue of Journal on Pages 231-2.

RADIOTHERAPY IN MENSTRUAL AND MENOPAUSAL DISTURBANCES

Jackson W. Landham, M.D.
Atlanta

Normal Menstruation

The process of normal menstruation is rhythmic and complex, being characterized by the monthly flow of three to six ounces of menstrual fluid over a period of from three to five days. However, the menstrual habit which establishes the time, quantity and intervals of menstruation peculiar to the woman varies considerably. Dating from the period of established womanhood, the intervals, duration and quantity of the flow are considered normal in the given case, unless there is lack of rhythm or considerable pain. While we know that normal menstruation does not occur in the absence of ovarian tissue, we also know that there is a functional correlation or a dysfunctional antagonism of certain of the endocrine glands in normal menstruation and the disturbances of the menstrual cycle. This is evidenced by objective findings. The most important of these are hyperfunction of the thyroid gland at puberty, during menstruation and during the period of gestation. There are also functional changes of the suprarenal and pineal glands and the anterior lobe of the pituitary gland evidenced by changes in the mammary glands at puberty, menstruation, during pregnancy and following menopause.

Abnormal Menstruation

There are frequently marked disturbances of menstruation dating from puberty which may extend throughout the child-bearing period due to constitutional diseases, anatomical or acquired abnormalities or pelvic pathology. These menstrual disorders consist of amenorrhea, oligomenorrhea, menorrhagia, metrorrhagia or dysmenorrhea and may present marked irregularities in the rhythm or quantity of the flow. Therefore it is necessary to make a careful physical examination of all women who have menstrual disturbances. The history, giving information concerning the menstrual habit, the possibility of incomplete abortion, extrauterine or normal pregnancy or acquired pelvic pathology, is very essential. Adequate laboratory and x-ray examinations should be made on all patients and a basal metabolism test done on those in whom it is indicated. Pelvic examination should be done on all patients with menstrual disorders and frequently this should be supplemented by a diagnostic curettage to rule out the possibility of the presence of malignancy, submucous fibroids or polyp formation. There is, however, a considerable group of women in whom there is marked menstrual disturbance who show no demonstrable constitutional or pelvic pathology. In these cases a dysfunction or hyperfunction of some of the endocrine glands that normally perform an important part in the menstrual cycle must be postulated.

Indications For Radiotherapy

Radiotherapy properly administered accomplishes wonderful results in that group of women who have menstrual disturbances but show no essential pelvic pathology or general systemic disease. Ford and Drips, believing that the same etiological factors are responsible for such functional disturbances of menstruation as menorrhagia and metrorrhagia on the one hand and oligomenorrhea and amenorrhea on the other, report excellent results obtained experimentally and clinically by administering relatively small doses of x-ray over the ovaries and pituitary in amenorrhea and oligomenorrhea. Their clinical results show that menstruation was established in ten of eighteen cases treated for amenorrhea and oligomenorrhea and that there was marked improvement in the health of all the patients. In dysmenorrhea, menorrhagia, metrorrhagia and the vascular phenomena associated with menstrual irregularities, encouraging results have been obtained by them by irradiating the pituitary body, spleen and liver.

In severe cases of menorrhagia and metrorrhagia occurring during the child-bearing period I have given fractional x-ray treatments over the ovaries, or intrauterine applications of radium, even to the extent of producing a temporary amenorrhea, with very satisfactory results. Experimental and clini-

cal results with radiotherapy administered to women of the child-bearing age who have menstrual disturbances and who show no demonstrable pathology are sufficiently satisfactory to establish it a method of choice.

Uterine Fibroids

No discussion of menstrual irregularities during the child-bearing period would be complete without considering uterine fibroids, the most prevalent of all pelvic neoplasms. These tumors originate in the musculature of the uterus as intramural neoplasms, but in their growth inward or outward they may become submucous or subserous. They are frequently multiple and usually cause menorrhagia and metrorrhagia associated with sterility and a prolonged menopausal period. Pain is usually absent but when it is present it is suggestive of pressure, infection or torsion of the pedicle of the tumor, or rarely malignant changes.

Methods of Treatment

Radiotherapy: The plans of treatment, so well stated by Neill, consist of radiation, operation or observation; the choice depending upon an accurate classification. Radiotherapy is the method of choice in a great majority of uterine fibroids since they are frequently multiple, associated with sterility, and are of such size as to prevent a normal period of gestation. Since fibroids occasionally develop after the menopause and in women who have had their ovaries removed, it is evident that the presence of functional follicular ovarian tissue is not necessary in their formation and development. Radiotherapy frequently causes a regression of fibroids after the menopause indicating that there is a specific and direct action of the radiation on the tumor itself. Therefore in women of the child-bearing period radiation should be applied directly over the uterus, protecting the ovaries by means of sufficient lead, or a limited time of irradiation may be given by the intrauterine application of radium. Control of menstrual disturbance and a regression of the fibroid can frequently be accomplished without producing an artificial menopause. The menopausal dose should be given to all patients whose general health would contra-indicate pregnancy, those near the spontaneous menopausal age and to those not responding to smaller doses.

Surgery

Painful degenerating fibroids and those associated with definite lateral inflammatory complications, or marked pressure symptoms should be treated surgically.

Observation

There are many women of the child-bearing period who have small symptomless fibroids that are found during routine pelvic examination. These patients should be informed of the presence of the neoplasm and should be impressed with the necessity of subsequent pelvic examinations at intervals of from six to twelve months for observation. Some of these tumors grow very slowly and others undergo regression without treatment. Fibroids that develop near or at the menopausal period, unless associated with considerable menstrual disturbance, should be let alone because many of them disappear at the close of the follicular period of the ovaries.

Normal Menopause

The normal menopause represents that period in a woman's life when there is a permanent cessation of menstruation and usually occurs between the thirty-eighth to the fiftieth year of life. Puberty established at an early age usually indicates a late menopause, while a late puberty is usually followed by an early menopause. The menopause is a physiological process and should be characterized in the healthy woman by less frequency in the menstrual periods and a smaller quantity of the flow. However, certain subjective symptoms occur with sufficient regularity to indicate the approach of the menopausal period. The most constant of these are hot flashes, attacks of perspiration, nervousness, irritability, headache and mental depression. Endocrine disfunction due to a cessation of ovulation and menstruation is sufficient to produce enough metabolic disturbance to cause these subjective symptoms until the other endocrine glands can compensate for the hypofunction of the ovaries. These symptoms in the normal woman should not occasion discomfort to such an extent as to require much treatment, but irradiation over the pituitary gland to control

the hot flashes and the administration of five grain emplets of whole ovary three times a day will afford much comfort in these cases.

Abnormal Menopause

There is a large group of women in whom the onset of the menopausal period is characterized by a marked disturbance of the menstrual cycle with an increase in the duration and quantity of the flow to the extent of "flooding periods." In this group all of the subjective symptoms incident to this period are accentuated causing a great amount of physical suffering and incapacity for home or social responsibilities. These symptoms may extend over a period of from one to five years in women who show no demonstrable pelvic or other pathology. A disturbed endocrine equilibrium is evidently the causative factor in such cases.

Radiotherapy

The artificial menopause is accomplished by means of irradiation with radium or x-ray, preferably x-ray, applied over the ovaries in two anterior and two posterior portals of entry. In the majority of the cases two treatments at intervals of six weeks are given. This routine plan has been observed so that a period of endocrine readjustment would be afforded the patient, rather than produce a sudden menopause by one treatment. If the physical condition of the patient is such that time would be a hazard the menopause should be produced by one treatment.

Certain symptoms and changes have been attributed to the spontaneous menopause by both laymen and physicians. These include many diseases, symptoms and conditions that are incidental to and have no connection with the menopause. Corscaden observed two hundred and six patients for a period of eighteen months who had had an artificial menopause produced by radiotherapy, and stated that the most constant symptom was the hot flash, but occasionally there occurred other sensory disturbances. There are no changes in the age appearance, secondary sexual characteristics or libido sexualis. Obesity rarely occurred. The basal metabolic rate was not changed. No increase in blood pressure occurred in patients under the age of forty and in cases where it did occur it was attributable to kidney disease, mode of life or emotional state.

My experience based on a series of ninety patients in whom an artificial menopause was produced by radiotherapy during the last few years is essentially in accord with that of Corscaden. However, it is true that an existing dysfunction of any of the endocrine glands concerned in the function of menstruation will be accentuated at the menopausal period. Marked nervous symptoms may occur in the hyperthyroid patient, obesity in the hypothyroid and hypertension in the hypersuprarenal individual. Since a menopause produced by radiotherapy causes limited symptoms compared with a menopause produced by surgery, it is certainly reasonable to believe that there are certain hormones that are not destroyed in producing a menopause by radiotherapy. These hormones are evidently secreted by the interstitial tissues of the ovaries.

Summary and Conclusions

Normal menstruation varies considerably in the quantity and duration of the flow, but when puberty is established it should be rhythmic. Puberty is an evolutionary epoch characterized by a correlated function of certain endocrine glands, the most important being the ovaries, thyroid, anterior pituitary and suprarenals. The menstrual habit should always be considered. Women who have disturbances of menstruation should be thoroughly examined to rule out the presence of general or pelvic pathology. Basal metabolism is important because the hypothyroid or hyperthyroid patient may show disturbances of menstruation. In a large group of women who show no demonstrable general disease or pelvic abnormality but who have marked menstrual irregularities, fractional, stimulating treatments of radiotherapy over the pituitary and ovaries frequently produce a normal menstrual cycle.

Uterine fibroids should be considered in all cases of menstrual irregularities since they are the most prevalent of all pelvic neoplasms and generally cause marked disturbances of menstruation associated with sterility. Their presence complicates the menopause by prolonging the period and accentuating its symp-

toms. It is important to determine the type of fibroid present in order that the proper plan of treatment may be carried out. The great majority of these tumors respond very satisfactorily to radiotherapy which causes no mortality. The treatment of fibroids occurring in women during the child-bearing period should be done without producing sterility unless the type of tumor or some general condition would constitute a definite hazard to gestation. A sterilization dose is indicated in patients of the menopausal age and those who show abnormalties justifying such a procedure. Painful and degenerating fibroids should be treated surgically. Small symptomless fibroids should be kept under observation.

The menopause represents a period in which there is a pluriglandular effort to compensate for the gradual diminution of hormones that have previously been supplied by the ovaries. If the endocrine glands correlated in function with the ovaries during the child-bearing period are functioning normally at the beginning of the menopausal period and if there is no demonstrable general disease present, there will be no considerable menopausal disturbances. Women who are afflicted with general disease, pelvic pathology or an unstable endocrine system, usually experience marked disturbances that may be termed a definite crisis. Radiotherapy to the extent of a permanent menopause, preferably avoiding a precipitate menopause, is a therapeutic agent of great value to these patients. Radiotherapy applied over the pituitary body frequently controls disturbing vasomotor symptoms.

The radiotherapeutic menopause is not followed by obesity, changes in age appearance, secondary sexual characteristics or libido sexualis. There is no significant change in blood pressure or basal metabolism.

REFERENCES

1. Anspach, Brooke, M., Gynecology, Philadelphia: J. B. Lippincott & Co., 1924.
2. Neill, William, Jr.: Treatment of Uterine Fibroids. Southern Medical Journal, 22: 271-275, March, 1929.
3. Ford, F. A. and Drip, D. G.: Clinical and Experimental Studies of Low Voltage Irradiation of the Ovaries and Hypophysis in Menstrual Disorders. Proceedings of the Staff meetings of the Mayo Clinic, December 26, 1928.
4. Corscaden, James A.: The Radiotherapeutic Menopause; Its Significance and Management. Am. Jour. of Ob. and Gyn 803-814, 11, 1926.
5. Linton, James R.: Marks, George A. and Smith, Geo. Van S.; The Treatment of Nonmalignant Uterine Bleeding by Radium. Jour. A. M. A., 92: 966-968, March 23, 1929.
6. Mararnon, Gregario: The Climacteric, St. Louis, C. V. Mosby Co., 1929.

ROUTINE CIRCUMCISION at BIRTH*

THOS. BOLLING GAY, M.D.
Atlanta

The variety of opinions held in every clinic of my acquaintance and the unsettled state of my own mind in regard to the proper care of the genitalia of male infants, stimulated me after a rather unique medical experience, to make the present study.

The pendulum has seemed to swing, if one way or the other, during the past ten years, toward the opinion that routine circumcision is unwarranted.

It is remarkable that an open question should exist in regard to an operation which has been performed as long as circumsion has. An Egyptian inscription, celebrating a victory over 3,000 years ago, in describing the slain, refers to the Libyans as uncircumcised (1). The Greek, Herodotus, the so-called father of history, during the fourth century B. C. said: "The Phoenicians and the Syrians in Palestine acknowledge that they learned the custom of circumsion from the Egyptians, but of the Egyptians and Ethiopians, I am unable to say which learned it from the other, for it is evidently a very ancient custom." (2)

It is rather surprising to learn that the operation has been as general a custom throughout the world as it has, without leading to a definite decision on our part. Even remote sections seem to have made it a practice. David Livingston in his book, Missionary Travels and Researches in South Africa, states that all the Bechuana and Caffre tribes south of the Zambesi practice circumcision. It has been found a custom in the South Seas and the Pacific (3), was known to the Aztecs in America (4), was almost universal among the native tribes of Australia (5), and is still practiced by the Tacunas of the Amazon region in South America (6).

Its relation to the Jewish and Mohammedan religions is well known. It is of interest that the Jews circumcise at birth and the Mohammedans at a marital age.

Parents daily approach us with the question: "Shall we or shall we not have our boy

*Read before the Medical Association of Georgia, Savannah, Ga., May 10, 1928.

circumcised?" The genitalia of their infants undoubtedly at all levels of society receive a special measure of anxious care and observation. Parents who think their child has a pathological condition of its genitalia are as much concerned as those who suspect a brain defect.

Such an attitude and the associated problems of cancer of the penis, masturbation, syphilis, and gonorrhea, with a possible connection with present day marital relationships, makes the subject a vital one to the medical profession of today.

An opportunity to survey the results of the methods in common use has been afforded me in the course of routine physical examinations of 8057 infants and children seen during the past five years.

I have reviewed, as a preliminary study, the records of 654 white and 158 colored male children whose ages ranged from less than one month to seven years.

My first intention was to find what proportion of children at successive ages up to seven years had an unretractable foreskin; 654 white male children were grouped according to age and as to whether or not an unretractable foreskin was present. Findings have been summarized in Table 1, and graphically represented in Charts 1 and 2.

TABLE I

AGES	All	-1	1-2	2-3	3-4	4-5	5-6	6-7
Age distribution-Number	654	225	150	86	68	84	26	15
Age distribution-incidence per 100 children of group studied	100	35	23	13	10	13	4	2
Circumcised and no phimosis—Number	257	84	48	31	30	44	12	8
Incidence per 100 children of age group	39	38	32	37	45	53	47	53
Phimosis—Number	397	141	102	55	38	40	14	7
Incidence per 100 children of age group	61	62	68	63	55	47	53	47

It was found to begin with that 61 per cent or over half not only had not been circumcised but had some degree of phimosis. In this group were included all children whose foreskins could not be retracted so as to fully expose the glands whether the difficulty seemed to be due to adhesions or to narrowing of the preputial orifice. In most of these cases large masses of walled off smegma were present.

The parents of these children were in most instances intelligent and capable of carrying out the instructions of their physicians if any would be as can be judged by the fact that the majority of them brought their children for medical supervision to keep them in good condition rather than because they were sick. All of the children were delivered by physicians. It would seem evident therefore that not only did physicians in over half of the cases not advise circumsion but also that they either felt it best to let nature take its course or failed in their attempt to cooperate with the parents in keeping the foreskins free.

The separation of the children into age groups brings out the fact that there is a marked reduction in the incidence of cases of phimosis after the age of 3 years. Two factors are probably involved here. A number of children not circumcised at birth are circumcised during the second and third year and, due to natural causes, it would seem that a considerable number of foreskins formerly unretractable become retractable during these years.

The latter supposition that during the second and third years many cases of phimosis clear up without medical intervention seems substantiated by my findings among the 158 colored boys examined. Circumcision and medical attention to the genitalia are rare in colored children. The incidence of phimosis in the ones examined however dropped after the age of 2 to 3 years to about one-half of what it was preceding this period as may be seen in Table II.

TABLE II—Colored

AGES	All	-1	1-2	2-3	3-4	4-5	5-6	6-7
Age distribution-Number	158	60	30	21	18	29		
Age distribution-incidence per 100 children of group studied	100	37	19	14	12	18		
Phimosis—Number	122	55	26	18	10	13		
Phimosis—incidence per 100 children	11	91	87	85	55	45		

Two to three years is undoubtedly a very common age for circumcision in the whites. In a group even as small as 130 children not having phimosis I found an increase in the proportion circumcised after the second and third years. These findings are summarized in Table III.

TABLE III

AGES	All	-1	1-2	2-3	3-4	4-5	5-6	6-7
Age distribution—number	130	23	27	16	13	11	12	8
Circumcised—number	32	4	6	4	5	6	3	2
Circumcised—per cent of group	25	17	22	25	30	49	25	25

Lanman, of Boston (7), discussing the 57,000 cases attending the outpatient department of the Children's Hospital, selects the second and third years of childhood as the most common one for children to be referred to him for circumcision and objects to this age period for the following reasons:

That a general anesthetic is necessary—That post operative cleanliness is impossible as the children have usually not gained voluntary control of urination and sometimes of defecation and that after circumcision, due to wet ammoniacal diapers balanitis and ulceration at the meatus, with the possibility of narrowing of the orifice and stricture, occur.

In spite of circumcision, other medical means of intervention and the operation of natural causes, it is to be noted that the incidence of phimosis in the whites has not dropped lower than 47 per cent and in the colored lower than 45 per cent at the end of the age period studied. What proportion of cases persist from seven years to adult life is open to conjecture. I have encountered no data of recent years in regard to the frequency of phimosis in adults.

A great deal has been said and written about the baneful effects of phimosis, apparently, with very little foundation.

Balanitis as a sequence of phimosis is rare. Only 38 cases of balanitis were observed among 57,000 children attending the outpatient department of the Children's Hospital, Boston, and 14 of these were due to ammoniacal diapers, eight of which recurred after circumsion (7).

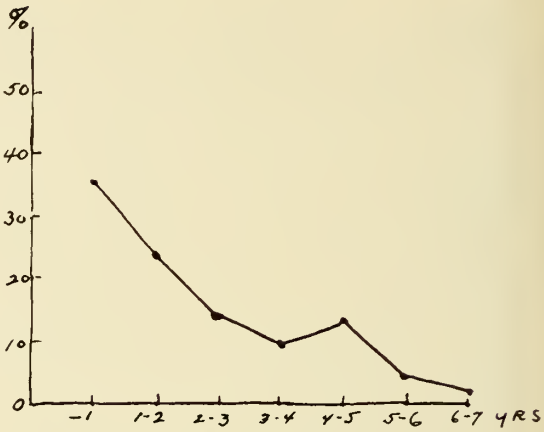


Chart I Curve shows % of all children studied in age groups.

I have seen proportionately few cases of balanitis and only two cases of paraphimosis. Only two cases requiring dorsal slit occurred also in the outpatient clinic of the Children's Hospital, Boston (7).

Phimosis might be considered on purely theoretical grounds a predisposing cause of enuresis but proof is lacking entirely to show that it is in any way a causative factor. Of 789 cases admitted to the pediatric department of Johns Hopkins Hospital 454 were in boys and only a slightly smaller number 335 occurred in girls. (8) Adhesions are rare in girls in my experience. Certain it is that circumcision does not cure enuresis.

Masturbation occurring in boys with long foreskins, some phimosis, preputial adhesions, and especially if an irritative process is present is usually stopped by circumcision. However the period of soreness following the operation provides a break which of itself would help to stop the habit. Whether circumcision at birth would prevent most cases of masturbation is unknown.

Hugh Young in his Practice of Urology published during 1927 in discussing the relationships of phimosis to cancer of the penis says: "35 carcinomata of the penis occurred in 12,500 cases at the Brady Urological Institute.

Epithelioma of the penis is quite precocious and many cases occur before the cancer age.

Phimosis is generally considered as predisposing to carcinoma. All writers remark upon the freedom of circumcised Jews and

Chart II Curve shows incidence phimosis under 1 yr to 7 yrs. of age

Mohammedans from the disease, Kuttner alone presenting evidence to the contrary. He learned by correspondence with Djemil Pasha of the Military Medical School at Constantinople, that in five years four operations had been carried out there for carcinoma of the penis. Djemil further states that in two series of 100 genital operations, there were 3 carcinomata of the penis in circumcised group and 2 in the uncircumcised group. It is conceivable, from these figures, that Jews enjoy a racial immunity and that early circumcision may have no effect whatever in preventing cancer of the penis. Barney, Demarquay and others have noted a high proportion of phimosis among cases of cancer of the penis they have studied. Schreiner and Kress found a history of phimosis in only one of their 18 cases. In our series of 35 cases, phimosis had been present at some time in 16, but this statement must be qualified. In at least three of these circumcisions had been performed many years before, in one case thirty-four years. In some others—the exact number cannot be given—the phimosis had developed as a result of induration or edema due to the cancerous growth. We may conclude then, that an unretractable or adherent prepuce should be removed—the prophylaxis of cancer being only one of the reasons therefor—but that circumcision does not necessarily prevent cancer. Some of the circumcisions followed by cancer may have been incomplete, but it is impossible to give statistics on this point." (9)

In regard to gonorrhea and syphilis, Hugh Young, also in his Practice of Urology states: "It is possible that its widespread use as a religious rite came from the fact that circumcision was a potent factor in preventing the acquiring of syphilis and other diseases of the penis, urethra, glands and prepuce." (10) We would infer from this that the foreskin, retractable or unretractable, is considered a weak point in the defensive mechanism of the body to venereal disease. It is conceivable that an unretractable foreskin, theoretically at least, might even be more of a handicap.

The question presents itself, should all children be circumcised at birth because over half of them will have some degree of phimosis at seven years and because a few of this half will probably be more apt to develop balanitis, cancer of the penis, masturbation, and venereal diseases?

The normal sensitiveness and lubricating secretions of the preputial skin are said to be much appreciated later in life. Definite data is of course not available on the subject.

Children have been reported as dying of hemorrhage following circumcision. We would expect some abnormal condition of the blood under such circumstances which would have required treatment regardless of circumcision.

Mutilation of the penis preventing normal function as a result of circumcision has been talked of but I have never seen a case.

The opponents of routine circumcision at birth lay much stress on the possibility of the development of the meatal ulcer, theoretically resulting in narrowing and stricture of the urethral orifice, and due to contact of the ammoniacal diapers with the exposed glands in the circumcised child. Such ulcers are of fairly frequent occurrence. The development of stricture, however, seems a remote possi-

(Continued on Page 224)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

MAY, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

THE MACON SESSION

The eightieth annual session of the Medical Association of Georgia will long be remembered by all those who were so fortunate as to attend. We had the largest out-of-town registration in the history of the Association. The physicians of Macon fulfilled in every respect the predictions of the general chairman, Dr. C. C. Harrold. "Southern hospitality" has long been famous; "Georgia hospitality" has been synonymous with the best; "Macon hospitality," as enjoyed by all those attending the eightieth annual session, will always be remembered and referred to as a red letter day in the history of our Association.

To give a list of those responsible for the wonderful success of the Macon session would require giving a roster of the entire membership of the Bibb County Medical Society and the Woman's Auxiliary. The President, Dr. C. L. Ridley; the Vice-President, Dr. H. G. Weaver and the Secretary-Treasurer, Dr. R. C. Goolsby, Jr., were ably assisted by the chairman of the general committee on arrangements; Dr. C. C. Harrold, the chairman of the Entertainment Committee; Dr. C. H. Richardson, Jr., and the chairmen and members of the various other committees. They all performed their work so well that they formed a model which may well be followed by future committees.

The Scientific Program, which was wisely limited to thirty-one papers, was one of the best in the history of the Association. Only one essayist was absent and his place was promptly filled by an alternate. The clinics given by the Macon physicians on Wednesday afternoon proved to be one of the most interesting and instructive of the scientific meetings. From the comments of members we believe clinics have won a permanent place on future programs.

We were particularly fortunate in securing our invited guests: Dr. William S. Baer, of Baltimore, who gave the Abner Welborn Calhoun Lecture on "Arthritis;" Dr. Leora G. Bowers, of Dayton, Ohio, who gave a most instructive paper on "Certain Splenic Syndromes With Indications For Splenectomy," and Dr. Morris Fishbein, editor of Hygeia and the Journal of the A. M. A., who gave a masterful address on "Fads and Quackery in Medicine" at the public meeting on Wednesday night. Incidentally, from the success of this public meeting it would seem wise to continue it as a permanent feature of all future programs.

To give a comprehensive account of the Macon session would require an entire issue of the Journal. Such being impossible we will close by requesting that every member follow the transactions and read the papers which will be published in the Journal from time to time during the year. We can not close, however, without paying a deserved tribute to President Sharp, who so ably conducted the affairs of the Association during his administration. He proved himself one of the wisest and ablest leaders in the entire history of the Association. His unselfish devotion to the Association formed an example which all members should trive to emulate.

The following officers were elected for the ensuing year: President-Elect G. Y. Moore, Cuthbert; First Vice-President Dr. C. H. Richardson, Jr., Macon; Second Vice-President Dr. Grady N. Coker, Canton; Delegate to the A. M. A., Dr. Allen H. Bunce, Atlanta; Alternate Delegate to the A M. A., Dr. H. G. Weaver, Macon. Augusta was unanimously chosen for the 1930 session.

With the close of the 1929 session President-Elect William R. Dancy, Savannah, was inaugurated as President for the ensuing year. He has already devoted a great deal of time and thought to the work of this year and will receive the unanimous support of every loyal member of the Association in making this a banner year.

A. M. A. OFFICIAL CALL

To the Officers, Fellows and Members of the American Medical Association:

The eightieth annual session of the American Medical Association will be held in Portland, Oregon, from Monday, July the eighth, to Friday, July the twelfth, Nineteen hundred and twenty-nine.

The House of Delegates will convene on Monday, July the eighth.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, July the ninth, at 8:30 P. M.

The various sections of the Scientific Assembly will meet Wednesday, July the tenth, at 9 A. M., and at 2 P. M., and subsequently according to their respective programs.

WILLIAM S. THAYER, *President.*
FREDERICK C. WARNSHUIS,
Speaker, House of Delegates.
Attest:
OLIN WEST, *Secretary*
Chicago, Illinois, April the fifteenth.

HOUSE OF DELEGATES

The House of Delegates will convene at 10 a. m. on Monday, July 8, 1929, in the Ballroom of the Multnomah Hotel, 269 Pine Street.

REPRESENTATION

The apportionment of delegates made at the Minneapolis Session of 1928 entitles your State Association to three delegates for 1029-30-31.

"A member of the House of Delegates must have been a member of the American Medical Association and a Fellow of the Scientific Assembly for at least two years next preceding the session of the House of Delegates at which he is to serve."

"Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one-half, as near as may be, shall be elected each year. Delegates and alternates elected by the sections, or delegates appointed from the United States Army, United States Navy and United States Public Health Service shall hold office for two years." —Chap. 1, Secs. 1 and 2, By-Laws.

RULES FOR THE GUIDANCE OF THE COMMITTEE ON CREDENTIALS

Adopted by the House of Delegates at Atlantic City, N. J., June 6, 1912

1. Credentials shall be of two parts. The first part shall be sent to the office of the Secretary of the American Medical Association by the Secretary of the constituent association, not later than seven days prior to the first day of the first meeting of the House of Delegates, and shall be a list of delegates and alternates for that association. The constituent associations shall designate an alternate for each delegate, who may take the pledge of the delegate when authorized to do so by said delegate in writing. In the absence of such authority, any alternate who has been duly chosen by the constituent association may be seated in place of any delegate who is unable to attend, provided he presents proper official authority from said association. A certificate signed by the president or secretary of the constituent association shall be deemed legal authority (as amended June 7, 1921.)

2. Each delegate shall be furnished with a credential by the secretary of the association by which he is elected on a prescribed form furnished by the Secretary of the American Medical Association, which shall give the date and term for which he was elected and who was elected to act as alternate for him in case of his inability.

3. A delegate, on presenting himself to the Committee on Credentials, may be seated even though he may not present part 2 of his credentials, provided he is properly identified as the delegate who was elected by his association and whose name appears on the Secretary's record.

4. No alternate may be seated unless his credentials meet the same requirements as designated for the delegate to act for him, except as provided for in Section 1 as amended (as amended June 7, 1921.)

SCIENTIFIC ASSEMBLY

The General meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held Tuesday evening, July 9, 1929, at 8:30. The Sections will meet on Wednesday, Thursday and Friday, July 10, 11 and 12, 1929.

Convening At 9:00 A. M. the Sections On

Practice of Medicine.
Obstetrics, Gynecology and Abdominal Surgery.
Laryngology, Otology and Rhinology.

Pathology and Physiology.
Orthopedic Surgery.
Urology.
Radiology.
Preventive and Industrial Medicine and Public Health.

Convening At 2:00 P. M. the Sections On

Surgery, General and Abdominal.
Ophthalmology.
Diseases of Children.
Pharmacology and Therapeutics.
Nervous and Mental Diseases.
Dermatology and Syphilology.
Gastro-Enterology and Proctology.

REGISTRATION DEPARTMENT

The Registration Department will be open from 8:30 a. m. until 5:30 p. m. on Monday, Tuesday, Wednesday and Thursday, July 8, 9, 10, and 11, and from 8:30 a. m. to 12:00 noon on Friday, July 12, 1929.

ROUTINE CIRCUMCISION AT BIRTH

(Continued from Page 221)

bility and the whole situation can be very easily avoided or the condition corrected by very simple measures. Cooke has demonstrated that the excess of ammonia is created by the growth, in the voided urine, of the Bacillus Ammoniagenes, a normal inhabitant of the stools of a child on an artificial or mixed diet. The growth of this organism is inhibited by dipping the diapers before drying in a 1-20 boric acid solution or a 1-10,000 bichloride solution (11).

It seems generally conceded that circumcision provides better hygienic conditions, especially among boys who are old enough to object to the attentions of their mothers along this line and too young to appreciate cleanliness (12).

Summary

We may summarize then, as follows:

Sixty-one per cent of 654 white male infants had some degree of phimosis.

The second and third years are selected as a common age period for circumcision to be performed and the advisability of circumcision at this aged period is open to question.

Forty-seven per cent of the children examined at seven years had some degree of phimosis.

Phimosis may be a cause of balanitis in some cases.

There is no available evidence to show that circumcision will prevent cancer of the penis but phimosis may be a predisposing cause.

There is no evidence to show that phimosis is a cause of enuresis.

Phimosis may be a predisposing cause of masturbation in some cases.

Phimosis may provide a weak point in the body's defensive mechanism against venereal disease.

The normal sensitiveness and lubricating secretions of the preputial skin are said to be much appreciated in later life but no data is available.

Hemorrhage following circumcision at birth cannot be considered seriously as a contraindication.

Mutilation of the penis preventing normal function following circumcision is conceivable but must be very rare.

Meatal ulcer due to ammoniacal diaper in the circumcised is not a contraindication as it can be easily cured and prevented altogether.

Circumcision is conducive to better hygienic conditions.

Conclusions

The differences of opinion are due to lack of definite data on the subject involved and further study is indicated.

The weight of the evidence thus far is in favor of the opinion that routine circumcision at birth is warranted.

REFERENCE

1. Braisted, James Henry—Ancient Records of Egypt, Chicago and Leipzig, 1906, five vols.
2. Herodoti, Liber II, Cap. 104, Ed. Tenner, p. 179.
3. Brown, Geo.—Meloneseans and Polynesious London, 1910.
4. Cancroft, Hubert H.—The Native Races of the Pacific States of North America. N. Y. 1875-6.
5. Hutton, Webster—Papers and Proc. Amer. Soc. Soc. Vol. XII, 1917, page 46.
6. Wright—Dawn of Surgery, N. Y. Med. Jour. Jan. 17, 1923.
7. Lanman, T. H.—Boston, Mass., and S. J. 190; 628-630. April 10, 1924
8. Young, Hugh H.—Practice of Urology, 1927, page 665.
9. Young, Hugh H.—Practice of Urology, 1927, page 703.
10. Young, Hugh H.—Practice of Urology, 1927, page 643.
11. Cooke, Amer. Jour. Dis. Child. Vol. 22, page 481.
12. Hamilton, A. J. C. and Middleton, D. B. Laucet. Sept. 24, 1927, pages 2639-646.

The first day of Emory Alumni Clinic Week will be devoted to class reunions, clinics, reminiscences and past associations on the campus. Dinner will be served at 1 P. M.

District and County Societies

DISTRICT OFFICERS

FIRST DISTRICT

President.....Myers, William H., Savannah
1st Vice-Pres.....Elarbee, Geo. W., Daisy
2nd Vice-Pres.....Ezell, Howard E., Oliver
Sec'y-Treas.....Long, Wm. V., Savannah

SECOND DISTRICT

President.....Chason, Thomas, Donalsonville
Vice-Pres.....Sanchez, S. E., Barwick
Sec'y-Treas. .....Watt, Chas. H., Thomasville

THIRD DISTRICT

President.....Lunsford, G. G., Cordele
Vice-Pres. .....Ware, R. M., Fitzgerald
Sec'y-Treas. .....Greer, Chas. A., Oglethorpe

FOURTH DISTRICT

President.....Clark, W. H., LaGrange
Sec'y-Treas.....Callaway, Enoch, LaGrange

FIFTH DISTRICT

President.....Fort, A. G., Atlanta
Vice-Pres.....Camp, R. T., Fairburn
Sec'y-Treas.....Evans, J. R., Decatur

SIXTH DISTRICT

President.....Miller, G. T., Macon
Vice-Pres.....Hunt, K. S., Griffin
Sec'y-Treas.....Thompson, O. R., Macon

SEVENTH DISTRICT

President.....Wood, Chas. V., Cedartown
Vice-Pres.....Alsobrook, J. S., Rossville
Sec'y-Treas .....Perkinson, W. H., Marietta

EIGHTH DISTRICT

President.....Carter, D. M., Madison
Vice-Pres.....Gholston, W. D., Danielsville
Sec'y-Treas. .....Gerdine, Linton, Athens

NINTH DISTRICT

President.....Ross, S. T., Winder
Vice-Pres. .....Welchel, C. D., Gainesville
Sec'y-Treas.....Bennett, J. C., Jefferson

TENTH DISTRICT

President.....Cranston, W. J., Augusta
Vice-Pres. .....McGahee, R. C., Warrenton
Sec'y-Treas.....Phinizy, Irvine, Augusta

ELEVENTH DISTRICT

President.....McMichael, J. R., Quitman
Vice-Pres.....Fleming, Albert, Folkston
Sec'y-Treas. .....Reavis, W. F., Waycross

TWELFTH DISTRICT

President.....Franklin, R. C., Swainsboro
Vice-Pres.....Edmondson, J. W., Dublin
Sec'y-Treas.....Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.
2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richmond, November 12, 1928.
3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.
4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.
5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.
6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.
7. Jasper County, Dr. E. M. Lancaster, Shady Dale, January 19, 1929.
8. Ben Hill County, Dr. L. S. Osborne, Fitzgerald, January 21, 1929.
9. Taylor County, Dr. J. C. Hind, Reynolds, January 29, 1929.
10. Monroe County, Dr. J. O. Elrod, Forsyth, February 6, 1929.
11. Barrow County, Dr. W. L. Matthews, Winder, February 7, 1929.
12. Dooly County, Dr. F. E. Williams, Vienna, March 8, 1929.
13. Macon County, Dr. C. P. Savage, Montezuma, March 8, 1929.
14. Crisp County, Dr. J. N. Dorminy, Cordele, March 19, 1929.
15. Stephens County, Dr. C. L. Ayers, Toccoa, March 26, 1929.
16. Emanuel County, Dr. R. C. Franklin, Swainsboro, March 26, 1929.
17. Cobb County, Dr. L. L. Welch, Marietta, March 26, 1929.
18. Terrell County, Dr. Logan Thomas, Dawson, April 22, 1929.
19. Henry County, Dr. H. C. Ellis, McDonough, May 8, 1929.
20. Sumter County, Dr. Sylvester Cain, Jr., Americus, May 8, 1929.
21. Upson County, Dr. R. L. Carter, Thomaston, May 14, 1929.

NEW MEMBERS FOR 1929

Branch, A. C., Glennville.
Crane, J. F., Rome.
Culpepper, W. F., Senoia.
Davis, T. B., Newnan.
Fike, R. H., Atlanta.
Haddock, S. H., Millen.
Jackson, J. L., Manchester.
Jackson, T. W., Manchester.
Lawless, Frank, Augusta.
Smith, E. J., Hahira.
Thompson, E. F., Valdosta.
Weldon, J. B., Hampton.
White, J. R., Atlanta.
Whitehead, W. F., Columbus.

SEVENTH DISTRICT MEETING

The Seventh District Society of Georgia met at the county courthouse in La Fayette, Wednesday, April 3rd, at 10 A. M., Drs. Robert M. Harbin presiding, and M. M. McCord, secretary.

The addresses of welcome and response were dispensed with in order to give ample time for free discussions of all papers.

Invocation was delivered by Rev. H. L. Byrd.

Dr. J. P. Bowdoin made the report for the Committee on Public Policy and Legislation in his usual easy and very unique style, which is always enjoyed by all present.

A motion was made by Dr. P. O. Chaudron and seconded by Dr. M. M. McCord, inviting Dr. J. R. McCord, of Emory University, to hold one of his district clinics and lectures on obstetrics at some place in the Seventh District. The same was unanimously carried by the society.

The councilor for this district, Dr. M. M. McCord, made a report and urged every secretary and all other members to help get every eligible member of the district as a member of their respective county and state associations.

Dr. C. K. Sharp, president of the Medical Association of Georgia, made a very interesting address outlining some of our proposed legislation to come before the general assembly of Georgia next summer.

The following scientific papers were read and discussed:

Injuries of the Elbow Joint.
E. J. Radcliffe, Rome.

Appendicitis.
R. S. Bradley, Dalton.

Cranial Fractures.
Edward T. Newell, Chattanooga.

Chronic Antritis.
H. J. Ault, Dalton.

Clinical Indications and Interpretations of Blood Chemistry.
P. M. Temples, Rome.

Report of a Case of Vesico-Calculus.
J. L. Garrard, Rome.

The Feeding of the Sick Infant.
Eugene Schreiber, Menlo.

The Safety of Anesthesia.
A. C. Shamblin, Rome.

The President's Annual Address.
R. M. Harbin, Rome.

The election of officers resulted as follows:

President ..... C. V. Wood, Cedartown
Vice-President ..... J. S. Alsobrook, Rossville
Secretary-Treasurer ..... W. H. Perkinson, Marietta

The delegation from Marietta extended an invitation for the society to meet in that city in September as guests of Cobb County Medical Society and the same was accepted and the next meeting will be at that place on the 25th of next September.

The society was entertained at lunch by the Walker County Medical Society, assisted by the Woman's Club of La Fayette at the club rooms on Chattanooga Road. A most delightful luncheon was served to the great enjoyment of all present. A rising vote of thanks was extended by all the members of the society at the conclusion of the dinner.

There being no further business the society adjourned to meet in Marietta next September.

M. M. McCORD, Secretary.

LaFayette, April 3, 1929.

A. M. A. RESOLUTIONS REPORTS

To the Members of the House of Delegates:

> Resolved, That all reports of officers, Councils or standing committees of this Association, and all resolutions dealing with questions of policy of the Association, shall be filed with the Secretary of the Association sixty days in advance of the annual session of this House, published in the Bulletin, and mailed to every delegate at least thirty days before the annual session at which such resolutions or reports are to be considered.—Report of Reference Committee on Reports of Officers, Atlantic City Session.

The above resolution was referred to the Board of Trustees by the House of Delegates of the American Medical Association at its session held in Atlantic City in 1925, was approved by the Board, and was carried out in 1926, in 1927 and in 1928. Thus the members of the House of Delegates were enabled to familiarize themselves beforehand with the proposals offered and with official reports.

The first meeting of the House of Delegates at the Portland Session will be on Monday, July 8. It is desired that members of the House who intend to introduce resolutions "dealing with questions of policy of the Association" send copies of such resolutions to the Secretary of the Association on or before May 10, 1929. It is also desired that copies of all committee reports shall be placed in the hands of the Secretary by May 10. Such resolutions and reports can then be published in The Journal or in the American Medical Association Bulletin, and thus can be brought to the attention of delegates and members of the Association generally for thorough consideration.

OLIN WEST, M. D.,
Secretary.

Chicago,
May 2, 1929.

A special program has been arranged for those attending the Emory Alumni Clinics and the members of the Fulton County Medical Society to be held at the Academy of Medicine, 38 Prescott St., N. E., on June 6th, at 8 P. M.

BOOK REVIEWS AND ABSTRACTS

Mark S. Dougherty, M. D.
Department Editor

BOOK REVIEWS

Basal Metabolism In Health and Disease. By Eugene F. DuBois, M.D., Medical Director, Russell Sage Institute of Pathology, Associate Professor of Medicine, Cornell University Medical College, New York. Second Edition, Thoroughly Revised. Pages 431, with 92 illustrations. Price, $5.00. Lea & Febiger, Philadelphia.

"The subject of basal metabolism has during the last few years become of considerable importance to the practitioner of medicine. Most of the literature which deals with it, however, is written primarily for research workers or physiologists. The writer has therefore attempted to bring basal metabolism out of the realm of pure physiology into the domain of clinical medicine. The reviewer would be justified in appending to these lines from the preface, "The author has succeeded brilliantly in his purpose," and calling it a day.

It is impossible adequately to abstract this book, which is itself an abstract. The first half is devoted to metabolism in health. It opens with a readable historical epitome, takes up the chemistry of oxidation of carbohydrates, fats and proteins, and then reviews succinctly the great laws of physics on which respiratory metabolism rests. The author follows with the principles of the various metabolimeters, but spares us the wearisome technical details. Of the Tissot, he says: "The machine is not foolproof, but it is a fool-detector."

The difficulties that were overcome in establishing the norm in metabolism prove interesting. "It so happens that we know a great deal about the metabolism of normal young men. They make ideal experimental subjects, much better than dogs or guinea-pigs, and they are always available in laboratories." These words give this reviewer real pleasure. Without minimizing the incalculable benefits accrued to scientific medicine and the human race from animal experimentation, he feels that, where possible, results from experiments on humans are of greater interest and value; they also provide a potent argument against those of the anti-vivisectionists.

The pure science of the first part is illuminated with deft but sure touches; for example, "The metabolism of one dog plus one flea may be double that of the two measured separately." Such a sentence, while scientifically accurate and a classic illustration of the point he wishes to impress upon his readers, also serve to sustain their interest and to stick in their memories. It is to be deeply deplored that so few American scientists (and no German ones) have this genius for so appropriately and humorously improving the readability of their writings. Truly such flashes do point a moral and adorn a tale.

The second half of the book is devoted to metabolism in disease. The limit of both the interest and the knowledge of some physicians on the subject of basal metabolism is that it is something which is increased in toxic goiter. The limits of both will be vastly extended by reading the discussion of metabolism in undernutrition, overnutrition, diabetes, dyscrasias of the thyroid and other endocrins, diseases of the heart and kidneys, and of the nervous system, as well as water metabolism and the effects of drugs upon the process.

Reading this treatise will stimulate the interest of the average physician in both metabolism and the larger aspects of the pathologic conditions mentioned, and will broaden his comprehension of them. It will also interest and amuse him. The carefully selected tables and diagrams make this book invaluable to the practitioner as a ready work of reference and certainly by laboratory in which basal metabolic rates are run should be without it.

Dr. DuBois has skillfully laid his course between the devil of superficiality and the too great depths of the deep blue sea.

L. MINOR BLACKFORD, M.D.

The Principles of Sanitation, by C. H. Kibbey, M.D., F. A. Davis Company, Philadelphia; 34 illustrations, 354 pages.

This book gives in small space and simple language the main facts of practical sanitation. It is clear and concise with a wholesome directness that is rather unusual. The discussions of the infectious, nutritional and occupational diseases, and of fly and mosquito control are confined to known facts and practical knowledge in such a way as to impress the reader with the author's familiarity with his subject through extensive reading and through wide, practical experience. As a practical handbook for public health workers, nurses, teachers and others interested in sanitation it is unique and invaluable. Its simplicity and correctness commend it to the layman.

GEORGE F. KLUGH, M.D.

Spinal Anesthesia. Since reviewing Charles H. Evans' recent monograph on Spinal Anesthesia, I feel greatly benefited in the knowledge of the subject.

He has treated the subject thoroughly, wisely and fairly, and in addition to discussing the method of his own choice, has extensively and impartially discussed the various methods used by other men.

The accompanying map, designed as Figure 1, is one of the greatest aids that I have found in the study

of the physiology of spinal anesthesia. It alone is almost worth the price of the book.

My impression of the work leads me to say that one (if he be interested in spinal anesthesia) should not deny himself the ownership of one of these books. Publishers: Paul B. Hoeber, Inc., 76 Fifth Avenue, New York City.

GEORGE W. FULLER, M.D.

ACCEPTED

To the Editor:

In addition to the articles enumerated in our letter of March 30, the following have been accepted:

Abbott Laboratories—
Bismarsen.
Ciba Co., Inc.—
Digifoline-Ciba.
Digifoline-Ciba Liquid.
Ampules Digifoline-Ciba Solution, 1 cc.
Ampules Digifoline-Ciba Solution, 5 cc.
Tablets Digifoline-Ciba.
Parke, Davis & Co.—
Diphtheria Toxoid.
E. R. Squibb & Sons—
Insulin-Squibb, 80 units, 10 cc.
Winthrop Chemical Co., Inc.—
Tablets Theocin Soluble, 2 1-2 grains.

COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

Chicago, April 26, 1929.

CENTENNIAL MEMORIAL BUILDING FUND

To the Editor:

Due to the absence of the writer, who has been in Florida working the Alumni in that state, the matter of writing you our appreciation of your efforts in getting an additional supply of Journals, carrying notices of the Centennial Memorial Building Fund campaign, into the hands of the Alumni, has been delayed. This publicity has been of more benefit to the campaign than any one thing we have done so far. The Alumni in Florida especially seemed to appreciate it. As stated above, though we are a bit tardy in expressing it, we wish to thank you for your part in this work.

We also wish to take this opportunity to inform you of the progress of the campaign. To date we have raised $85,000.00 towards the $300,000.00 quota. The state of Florida and a small portion of Georgia alone have contributed this amount. In view of this, and considering the adverse conditions of weather under which we had to travel, and the flu epidemic in the early days of the campaign, we feel very optimistic about the success of the project.

GEORGE Y. BROWNE, JR.,
Campaign Manager.

COST OF MEDICAL CARE

To the Editor:

Dr. Nathan Sinai, one of the members of the Research staff of the Committee on the Cost of Medical Care, informs me that he will soon be in your state for the purpose of undertaking a study of certain conditions under the auspices of the committee. He advises me that he wishes to take up this matter with you, the Secretary of the Medical Association of Georgia, before proceeding with the work.

I think you will find Dr. Sinai an earnest young gentleman who is trying hard to do a helpful piece of work toward determining some important facts bearing on the cost of medical care. As you probably know, I am a member of the Committee on the Cost of Medical Care along with Dr. M. L. Harris, our president-elect; Dr. J. Shelton Horsley, Dr. Follansbee, of our Judicial Council, and a number of other physicians.

I hope that Dr. Sinai's program will meet with your approval and with the approval of the Medical Association of Georgia, and that you will be able to give him encouragement and aid in his efforts to arrive at facts he is seeking to establish.

OLIN WEST, M.D.

Chicago, April 3.

NEWS ITEMS

Dr. H. H. Lancaster, formerly of Waycross and a member of the staff of the Atlantic Coast Line Railroad Hospital, has removed to Hoschton, and associated with Doctors L. C. and M. B. Allen in the practice of medicine and surgery.

Dr. W. C. Lyle, Atlanta, announces that he has discontinued the treatment of ear, nose and throat disorders and in the future will limit his practice to diseases of the eye.

The Fourth District Medical Society met at LaGrange on April 25. Dr. E. W. Glidden, Alto, read a paper on Tuberculosis; Dr. Lawson Thornton, Atlanta. Fractures, illustrated with moving pictures; Dr. Guy D. Ayer, Atlanta, Headaches; Dr. Guy J. Dillard, Columbus, Peptic Ulcer.

The American Pharmaceutical Manufacturers will meet at Old Point Comfort, Va., June 3 and 6, inclusive. The Chamberlin-Vanderbilt Hotel will be headquarters. Twenty-five leading Canadian manufacturers have been invited to attend and participate together with representatives of the British Chemical Manufacturers.

The First District Medical Association met at Statesboro, March 14. The scientific program consisted of the following titles: Typhoid Fever, by Dr. E. C. Watkins, Brooklet: Therombo-Angitis Obliterrans, by Dr. Charles Usher, Savannah; Winter Infections In Childhood, by Dr. A. J. Waring, Savannah; Classification of Brights Disease From the Laboratory Standpoint. Report of five cases by Dr. John W. Daniel, Savannah; Fracture of the Neck of the Femur, by Dr. J. Z. Patrick, Pulaski; Stricture of the Urethra, by Dr. William Shearouse, Savannah; A Consideration of the Elderly Primipara During Pregnancy and Labor, by Dr. C. Thompson, Millen; Inguinal Hernia, with a review of a series of cases, by C. F.

Holton, Savannah; Influenza, by R. L. Kennedy, Metter; Injection Treatment of Varicose Vein, by Dr. H. M. Kandel, Savannah.

Dr. Paul L. Holliday, Athens, has just completed a post graduate course at the University of Pennsylvania School of Medicine, Philadelphia, and announces that he will limit his practice to gynecology, obstetrics and female urology. Suite 308-309 Southern Mutual Building, Athens.

Drs. T. E. Rogers and C. L. Pennington, Macon, read papers before the Ocmulgee Medical Society at its meeting on April 5th at the Brown Hotel, Hawkinsville.

The Chicago Medical Society will hold its summer clinics June 17 to 29, inclusive. A registration fee of $10 will be charged to cover the cost of preparing and conducting the clinics which will consist of medical and surgical cases and ward walks.

Dr. Stewart R. Roberts, Atlanta, delivered an address on Jaundice before the Muscogee County Medical Society at its meeting on April 17th.

Drs. W. W. Jarrell and Roy A. Hill, Thomasville, attended the Clinical Congress of the American College of Physicians held at Boston, Mass., in April.

Dr. and Mrs. E. J. Dorminy, Fitzgerald, entertained the members of Ben Hill County Medical Society on April 2nd.

Dr. L. G. Neal, Cleveland, entertained the members of the Hall County Medical Society, April 3rd.

Dr. James R. McCord, Atlanta, gave lectures on the following subjects during the post graduate course given at Waycross, April 8th to 12th, inclusive: The Mechanism and Management of Normal Labor, Puerperal Infection, Occiput Posterior Positions, Versions Breech Presentations, and Hemorrhages of Pregnancy.

Dr. E. W. Glidden, Alto, will give free clinics on tuberculosis at Douglas in co-operation with the Coffee County Health Department.

Dr. Hugo Robinson, Albany, has been re-elected Commissioner of Health for Dougherty County.

The Eleventh District Medical Society will hold its next meeting in Douglas.

Dr. P. C. Quarterman, Valdosta, entertained the members of the Lowndes County Medical Society at dinner on April 12th at Ocean Pond.

The Barrow County Medical Society met at the Winder Hotel, Winder, on April 9th.

Dr. John D. Wiley, formerly of Milledgeville, has removed to Sparta, and opened offices in the post office building.

The Polk County Medical Society met in the City Hall at Cedartown on April 18th.

The American Heart Association will hold its scientific session at Portland, Ore., on July 9th, during the meetings of the American Medical Association.

Dr. E. P. Quillian, formerly of Valdosta, has removed to Brunswick.

Dr. D. J. Buchanan, formerly of Savannah, has been appointed a member of the staff of the Veterans' Bureau at Cleveland, Ohio.

OBITUARY

Dr. Henry Grady Carter. Member, Atlanta; Atlanta College of Physicians and Surgeons, Atlanta, 1913; aged 37; died April 4, 1929, at his home. He was a native of Hall County. After graduating in medicine, he began practice in Atlanta. Dr. Carter served as a medical officer during the World War. He was a member of the Fulton County Medical Society, American Medical Association, F. & A. M., Shrine, and Druid Hills Baptist Church. Surviving him are his widow, two daughters, Minnetta and Dorothy Carter; one son, Henry Carter; his parents, Mr. and Mrs. S. B. Carter, Gainesville; four sisters and three brothers. Funeral services were conducted from the Druid Hills Baptist Church by Rev. L. D. Newton, and interment in West View Cemetery.

Dr. John Boyd Rudolph. Member, Gainesville. University of Louisville School of Medicine, Louisville, Ky., 1894; aged 56; died at his home April 10, 1929, of heart disease. He was born and reared in Gainesville and attended the public schools of Hall County, later taking an academic course at Emory University. Dr. Rudolph has been trustee of Brenau College and at the time of his death president of the Rotary Club, a Mason and a Shriner. Surviving him are his widow, three children, Dixon, John, Jr., and Georgia Rudolph; one sister, Mrs. D. T. Quillian; two brothers, C. A. and James Rudolph, all of Gainesville. Funeral services were conducted from the home and interment in the city cemetery.

RESOLUTION

In the death of Dr. John M. Anderson, Barnesville, on February 20, 1929, the profession has lost one of its prominent members. He has been Secretary of the Lamar County Medical Society since its organization. Dr. Anderson was and had been continuously Vice-Councilor for the Sixth District for ten years. He was a member of the State Board of Medical Examiners, having been appointed by Governor Hardman in 1927.

Dr. Anderson had endeared himself to the public by his friendly disposition and charitable attitude toward his patients. He was in thorough accord with his fellow practitioners in Lamar County. On account of his close observance of medical ethics, friendly disposition, simple honesty of purse and enthusiastic effort toward every advancement of public and private health of the people of his home county and state. Whereas, these facts being true:

Be It Resolved, That we, the members of Lamar

County Medical Society will miss his comradeship, we deplore his untimely death, we sympathize with his family in their loss. Each of us do pledge ourselves to aid and advise his widow in any way possible toward an adjustment of her affairs and lend all our loving sympathy to the family in their bereavement.

That a copy of these resolutions be incorporated in the minutes of this society, a copy be sent to the Secretary-Treasurer of the Medical Association of Georgia and the original delivered to Mrs. Anderson.

Respectfully submitted,

J. M. ROGERS, M.D.
J. M. F. BARRON, M.D.
Committee.

Thomas Lorenzo Holcombe. Member, Jefferson. University of Georgia Medical Department, Augusta, 1913; age 50; died at his home on April 11, 1929, of heart disease. He formerly resided at Union Point moving to Jefferson and practicing there for only a few months, he had won the esteem of the people and had an extensive practice. Dr. Holcombe was a member of the Masonic lodge and the Baptist church. Surviving him are his widow, one daughter, Novine; and one son, Tom. Funeral services were conducted from the Baptist Church by Rev. R. L. Robinson and interment in the Statham Cemetery.

Henry Adams Smith. Member, Americus; Emory University School of Medicine, 1923; aged 27; died at a private sanitarium on April 17, 1929, of acute Brights disease. He was a member of the staff of Wise Brothers Sanitarium at Plains. Dr. Smith was a member of the Sumter County Medical Society, Masons and the First Methodist Church. Surviving him are his widow, father and stepmother, Dr. and Mrs. W. J. Smith, of DeSoto. Funeral services were conducted from the First Methodist Church by Rev. Loy Warwick, assisted by Rev. W. M. Blitch and interment in Oak Grove Cemetery.

Henry P. Hamrick. Member, Eatonton; Emory University School of Medicine, 1916; age 45; died at a private hospital at Macon on April 23, 1929, of angina pectoris. He formerly resided at Buford and practiced in that village and community and then removed to Eatonton. Dr. Hamrick enjoyed the confidence of the people who knew him. Surviving him are one daughter, Miss Norma, Atlanta; four sons, P. B. and H. L. Hamrick, Atlanta; Elmer and S. E. Hamrick, Cartersville; his father and five sisters.

Robin Adair. Member, Atlanta; Atlanta College of Physicians and Surgeons, Atlanta, 1903; aged 50; died April 26, 1929, of injuries received in an automobile accident near Forsyth. Mrs. Adair died from injuries received at the same time. He was born and reared in Gainesville and graduated from the University of Georgia before beginning the study of medicine. Dr. Adair was a member of the Druid Hills Baptist Church and Vice-President of the Men's Bible Class. Surviving him are four children and his father. Dr. Robin Adair, Sr. Funeral services were conducted by Rev. Louie Newton from the Druid Hills Baptist Church.

William H. Rusk, LaGrange, Southern Medical College, Atlanta, 1894; aged 56; died on April 10, 1929, at a private hospital. He was a prominent and successful physician with an extensive practice in Milton and adjoining counties. Surviving him are his widow, one daughter, Mrs. Ward Mayfield, Atlanta; two sons, P. D. Rusk, of Texas, and Wyckliff Rusk, of LaGrange. Funeral services were conducted from the Providence Baptist Church and interment in the city cemetery of Alpharetta.

Dr. Alfred Christie, Brunswick, College of Physicians and Surgeons, Baltimore, Maryland, 1897; died at his home on April 19, 1929. He had resided in Brunswick for thirty-two years practicing his profession. Dr. Christie had a large practice and was widely known for his charitable work. He was a member of a number of secret orders. Surviving him are one son, Alfred Christie, Jr., Washington, D. C., and an adopted daughter, Miss Cathrine Christie, Brunswick. Funeral services were conducted by Rev. Royal K. Tucker, from St. Marks' Episcopal Church and interment in the city cemetery.

Dr. Oscar N. Pendergrass, Monroe. Emory University School of Medicine, 1893; aged 57; died at his home on April 28, 1929, of pernicious anemia. He was a leading physician of Walton County for twenty-five years. Surviving him are his widow, one son, Dr. Robert C. Pendergrass, Americus; one daughter, Miss Allie Pendergrass, Monroe. Funeral services were conducted from the First Methodist Church and interment in the city cemetery at Monroe.

DREAMS DO COME TRUE

The Hoffmann-LaRoche Chemical Works have secured a tract of land at Nutley, N. J., 12 miles from New York City and are there erecting their new laboratories. Ground was broken with appropriate ceremonies last November and the construction work has been pushed with such vigor that it is hoped the Company will be able to move from their present quarters, 19 Cliff Street, New York City, to New Jersey early in May. Dr. Emil Barell, director of the Hoffmann-LaRoche activities in Europe was present at the November ceremonies and turned the first shovel full of earth. Mr. Elmer H. Bobst, general manager of the company, made an address full of hope and faith in the growth and success of the Roche organization.

This Company manufactures a large number of Council accepted products that are advertised in the official State Medical Journals and readers of this Journal will naturally be interested to know of the new developments which make it possible for the Hoffmann-LaRoche Company to greatly increase their production. This has been their dream and now the dream has come true.

THE EMORY CLINICS

JUNE 3-7, 1929

MONDAY, JUNE 3RD

8:00- 9:30 A.M.—Registration at old College Bldg., Cor. Armstrong & Butler Sts., for transportation to the campus.
10.00-11:00 A.M.—Reunion of the School of Medicine by classes in the Law Building.
11:00-12:00 A.M.—Alumni Oration, Theology Building.
12:00- 1:00 P.M.—Alumni Luncheon.

Wesley Hospital

1:30- 2:30 P.M.—Medical Clinic. Drs. Strickler and Reynolds.
2:30- 3:00 P.M.—Uses and Abuses of Iodine in Goitre. Dr. Waits.
3:00- 3:30 P.M.—Medical Clinic, Dr. Oppenheimer.
3:30- 4:00 P.M.—Gastric and Duodenal Ulcer, Dr. Grove.
4:00- 4:30 P.M.—Treatment of Summer Diarrhoeas, Dr. Anderson.
4:30- 5:00 P.M.—Radiation in Non - Malignant Uterine Hemorrhage, Dr. Landham.

TUESDAY, JUNE 4TH

White Grady Hospital

8:00-10:00 A.M.—Surgical Clinics, Drs. T. C. Davison and Geo. Fuller.
Ward Walk Fractures. Dr. Goodwyn.
Urological Clinic, Drs. Earl Floyd, Sinkoe and Kirkland.

Emory University Division, Grady Hospital

Surgical Clinics, Drs. Selman and McAlister.
8:30- 9:00 A.M.—Gonorrheal Arthritis, Dr. Topel.
9:00- 9:30 A.M.—Nephroses, Dr. Paullin.
9:30-10:00 A.M.—Acute Rheumatic Fever, Dr. Sauls.
10:00-10:30 A.M.—Burns, Methods to prevent Scarring, Dr. Highsmith.
10:30-11:00 A.M.—Differential Diagnosis of Fevers, Dr. Bunce.
11:00-11:30 A.M.—Technique of Forceps Delivery, Mannikin Demonstration, Dr. Bartholomew.
11:30-12:00 A.M.—Treatment of Urinary Calculi, Dr. Earl Floyd.
12:00-12:30 P.M.—Acute Dermatitis, Dr. Swanson.
12:30- 1:00 P.M.—Management of the Nervous Patient, Dr. W. A. Smith.
2:00- 4:00 P.M.—Ear, Nose and Throat Clinic, Gray Clinic, Drs. J. C. McDougal, Wm. McDougal, Equen, Colvin, Warren and Burgess.
Studies in Pathology, Dr. Norris.
Syphilis Clinic, Dr. Duncan.
Dermatology (White Grady), Dr. Hailey.
3:00- 4:00 P.M.—Syphilis, Or. Emery.
4:00- 5:00 P.M.—Vaccines and Serum Therapy, M. Sellers.

WEDNESDAY, JUNE 5TH

White Unit Grady Hospital

8:00-10:00 A.M.—Surgical Clinics, Drs. Donaldson and Clifton.
Urological Clinic, Drs. Earl Floyd, Sinkoe and Kirkland.

Emory University Division Grady Hospital

Gynecological Clinics, Drs. Denton and Walter Holmes.
8:30- 9:00 A.M.—Pneumothorax, Dr. Aven.
9:00- 9:30 A.M.—Inguinal Hernia and Its Complications, Dr. Sage.
9:30-10:00 A.M.—Therapeutic Suggestions in Dermatology, Dr. Hailey.
10:00-10:30 A.M.—Empyemia in Young Children, Dr. Dan Elkin.
10:30-11:00 A.M.—Management of Heart Disease, Dr. Shanks.
11:00-11:30 A.M.—Spinal Fluid Studies, Dr. Weaver.
11:30-12:00 A.M.—Diathermy in Gynecology, Dr. Benson.
12:00-12:30 P.M.—Modern Methods in Diagnosis and Treatment of Urological Conditions, Dr. Sinkoe.
12:30- 1:00 P.M.—Therapeutic Leukocytosis, Dr. Fancher.
2:00- 4:00 P.M.—Pediatric Clinic (Gray Clinic), Drs. Hines Roberts, Yampolsky, Jas. Wood and Kiser.
Syphilis, Gray Clinic, Dr. Duncan.
Urology, Gray Clinic, Drs. Bailey and Allison.
Studies in Pathology, Dr. Norris.
Oto-Laryngology (White Grady), Dr. Cline.
3:00- 4:00 P.M.—Differential Diagnosis and Treatment of Alkalosis and Acidosis, Dr. Funkhouser.
4:00- 5:00 P.M.—Diagnosis Tertiary Syphilis, Dr. Hailey.

THURSDAY, JUNE 6TH

White Unit Grady Hospital

8:00-10:00 A.M.—Gynecological Clinics, Drs. Mathews and Barber.
Urological Clinic, Drs. Earl Floyd, Sinkoe and Kirkland.

Emory University Division Grady Hospital

Surgical Clinics, Drs. Pruitt and Rushin.

Orthopedic Clinic, Drs. Hodgson and Smith.

8:30- 9:00 A.M.—Placeboes and Placebo Therapy, Dr. Leadingham.

9:00- 9:30 A.M.—Hemoglobinuria, Dr. Hal Davison.

9:30-10:00 A.M.—Opportunities and Responsibilities of a Country Practice, Dr. McArthur.

10:00- 1:00 P.M.—Tumor Symposium, Dr. J. L. Campbell, Presiding.

Breast Cancer, Dr. J. L. Campbell.

Primary Cancer of the Lung, Report 3 Cases, Dr. J. C. Davis.

Cancer of the Stomach, Dr. Floyd McRae.

Cancer Cervix, Dr. Denton.

Cancer Skin and Precancerous Lesions, Dr. Jack Jones.

Bone Tumors, Dr. Lawson Thornton.

Discussion on Pathology, Drs. Adams and Bishop.

Radiation X Ray, Drs. Clark and Fike.

Radiation Radium, Dr. Stewart.

2:00- 4:00 P.M.—Opthalmology, Gray Clinic, Drs. Calhoun, Clay, Stockard, H. C. Crawford and Martin.

Studies in Pathology, Dr. Norris.

3:00- 4:00 P.M.—Management of Occiput Posterior, Dr. Upshaw.

4:00- 5:00 P.M.—Amebic Dysentery, Dr. Abercrombie.

Fulton County Med. Society, 38 Prescott St., 8 P.M.

Appendicitis Acute, Differential Diagnosis, Dr. C. W. Roberts.

New Ideas of Food and Nutrition, Dr. Fitts.

Intestinal Obstruction, Dr. F. K. Boland.

Eye as a Cause of Headache, Dr. F. P. Calhoun.

FRIDAY, JUNE 7TH

White Unit Grady Hospital

8:00-10:00 A.M.—Surgical Clinic, Dr. J. T. Floyd.

Urological Clinic, Drs. Earl Floyd, Sinkoe and Kirkland.

Emory University Division Grady Hospital

Gynecological Clinic, Dr. Floyd McRae.

Urological Surgery, Drs. Boyd and Bailey.

8:30- 9:00 A.M.—Sterility in Women, Dr. Greene.

9:00- 9:30 A.M.—Chronic Intestinal Indigestion in Children, Dr. Yampolsky.

9:30-10:00 A.M.—Fractures of the Forearm. Lantern slides, Dr. Hodgson.

10:00-10:30 A.M.—Early Diagnosis of Tuberculosis, Dr. Thrash.

10:30-11:00 A.M.—Abdominal Pregnancy, Dr. Mooney.

11:00-11:30 A.M.—Jaundice, Dr. Stewart Roberts.

11:30-12:00 A.M.—Pernicious Anemia, Dr. Glennville Giddings.

12:00-12:30 P.M.—Classification of Hemorrhoids as to Operative and Injection Treatment, Dr. Pruitt.

12:30- 1:00 P.M.—Conservative Management of Acute Ear and Throat Conditions, Dr. H. C. Crawford.

2:00- 4:00 P.M.—Ear, Nose and Throat Clinic, Gray Clinic, Drs. J. C. McDougal, Wm. McDougal, Equen, Colvin, Warren and Burgess.

Syphilis, Dr. Duncan.

Urology, Drs. Bailey and Allison.

Dermatology, White Grady, Dr. Francis Jones.

Pediatric Clinic, Drs. Yampolsky, Muse, Bivings and Davenport.

Studies in Pathology, Dr. Norris.

7:00 P.M.—Alumni Banquet. Biltmore Hotel, Dr. T. C. Davison, presiding.

Address, Emory University, Pres. W. H. Cox.

Alumni Address by Dr. O. H. Bethea, Professor Tulane University, New Orleans.

ALTERNATES

Abdominal Symptoms of Organic Heart Disease, Dr. Treusch.

Conservative Gynecology, Dr. Cross.

For information write M. C. Pruitt, M.D., Secy., Mortgage Guarantee Bldg., Atlanta, Ga.

The next annual session of the Medical Association of Georgia will be held at Augusta, May 14, 15, 16, 1930.

The American Medical Association will meet at Portland, Oregon, July 8th to 12th.

The Southern Medical Association will meet at Miami, Florida, November 19, 20, 21, 22.

"COUNCIL PASSED"

Notification is being sent to the medical profession that the well known and deservedly popular Haley's M-O, Magnesia Oil has been accepted for N. N. R. of the American Medical Association. Henceforth the product will be known as Magnesia-Mineral Oil (25) Haley. It was certainly a happy thought to combine Liquid Petrolatum and Milk of Magnesia in the form of a permanent, uniform, unflavored emulsion. The taste is not at all unpleasant and the absence of any distinct flavor prevents the habitual user from growing tired of it.

The value of mineral oil as a lubricant and emollient for the treatment of certain forms of obstipation has been well established. In many cases, however, there is added to the need for lubrication the indication for the use of a mild laxative and ant-acid for which purpose years of clinical use have demonstrated Milk of Magnesia to be ideal.

Practically, there exists in many cases of intestinal stasis and constipation a hyperacid condition which calls for the use of an antacid.

Magnesia-Mineral Oil (25) Haley has therefore a therapeutic field considerably broader and more diversified than is the case with either one of its ingredients considered singly.

The makers of this product were prompt to realize this but were also well aware that skepticism or doubt is apt to be aroused when the number of indications for the product is large.

As evidence of good faith and entirely in the interests of the medical profession, numerous questionnaires have been sent out from time to time, giving the physician an opportunity to indicate exactly under what conditions his use of Magnesia-Mineral Oil (25) Haley proved most satisfactory. Response to these questionnaires has been prompt and numerous.

Tabulations have been carefully made of the replies received from physicians and only those indications mentioned in the literature which proved to have been common to a large number of doctors. In this way it is believed, undue claims have been avoided and the doctors have been given reliable information based upon actual clinical use.

The same method has been employed in the case of the dental profession, because dentists have been prompt to recognize the value of Magnesia-Mineral Oil (25) Haley as an antacid mouth wash. The advertising of this product has been kept within strictly ethical limits. The mails have been used regularly and, judging from the comments received from thousands of physicians, the attempt to call attention to Magnesia-Mineral Oil (25) Haley by the use of something different and original in the form of printed matter has been well received. The little booklet, "A Gift From the Gods," met with a very flattering reception and in the near future another feature will be sent to every physician in this country which will undoubtedly be not only welcome but given a permanent place in the doctor's waiting room, private office or home.

Another policy of the makers of this product is to be generous in the matter of samples for clinical trial and requests for same are always given prompt attention. The Haley M-O Co., Inc., Geneva, N. Y.

SOUTHEASTERN SANITARIUM

Southeastern Sanitarium, Atlanta, is advertised in the front of this issue of the Journal. It was formerly operated as Blackman Sanitarium, a general medical and hydrotherapeutic institution, favorably known over the South for twenty years.

Its very moderate rates of $5 and $6 per day, including hydrotherapy, general medical and nursing attention and large airy rooms with private water conveniences render it attractive to the physician seeking economical hospitalization for his patent. Its convenience, in-town location is also a feature.

Southeastern Sanitarium admits alcoholic and narcotic, as well as medical cases, and is prepared to administer the Sceleth and Towns-Lambert treatments, if desired.

Physicians are invited to make use of the Sanitarium and are assured of full co-operation in every way. Its location is 418 Capitol Avenue, S. E., three blocks from the State Capitol.

THERE'S A LURE IN THE LANDS OF THE WEST

Out in the wide open spaces where the cowboy makes whoopee—where the geysers climb toward heaven—where snow-crested mountain peaks shoulder out the sky—where lies the Grand Canyon, nature's greatest enigma—waterfalls, sapphire lakes, primordial grandeur—where the world is as before man came.

You spend an unforgettable vacation this summer, touring through this marvel country.

This is made possible by combining your visit to the American Medical Association Convention in Portland, Oregon, July 7th to the 12th, with pre-convention and post-convention tours.

The American Express Company has been authorized to plan our journeys, and it has mapped out a number of fascinating itineraries from which to make your choice.

Send for costs, complete information and literature to either of the two addresses given here.

Relaxation, escape from humdrum and monotony, and a vivid change of scenery and sights is in store for you.

American Express Company
91 Luckie Street, N. W.,
Atlanta, Ga.

The Journal of the Medical Association of Georgia,
Atlanta, Ga.

COMBINING THE MEDICAL CONVENTION IN PORTLAND WITH A GLORIOUS VACATION IN THE WEST

Summer being the time when we seek diversion and relaxation by treating ourselves and our families to a respite—we are given the splendid opportunity of combining attendance at the American Medical Asso-

Going to the Sun Chalet—Glacier National Park

Geyser—Yellowstone National Park

ciation Convention in Portland, Oregon, July 7th, to the 12th, with a vacation in the scenic lands of the west.

We have appointed the American Express Company as official transportation agents, and they have arranged a very interesting itinerary en route to Portland. Leaving Atlanta on June 28th, traveling through Chicago, St. Paul, Minneapolis, we arrive at Banff in the beautiful Canadian Rockies. We drive through the gorgeous scenery of the surrounding country to Lake Louise. On to Moraine Lake and the Valley of Ten Peaks, and then Vancouver. From here we board a steamer for a daylight sail down Puget Sound to Victoria, and finally, Portland, in time to attend the convention. This pre-convention tour has been described more fully in a previous issue of this publication.

After the close of the convention on July 12th, those of us who wish to prolong our stay in the west, are offered a number of excellently planned tours of various duration, which eventually bring us home.

Optional Return Trip No. 1

Takes us through Gardiner and Yellowstone National Park, that most popular of all our National Playgrounds. Here we see the famous geysers, streaks of silver spiralling toward the sky; gaze breathlessly at herds of buffalo, and perhaps photograph a wild bear; this is the neblest stretch of mountain scenery in our country. Then we visit Mammoth Hot Springs and travel over the famous Cody Road, with its mementos of that vivid personality, Bill Cody, known as "Buffalo Bill." Chicago is reached July 20th, southern and eastern points one day later.

Optional Return Trip No. 2

Tours Glacier Park—the most distinctly Alpine of all our National domains. It is the wildest, most

(Continued on Page XVI)

AMERICAN MEDICAL ASSOCIATION MEETING TOURS AND COSTS

Itinerary to Portland and Six Optional Returns From Portland

June 28th—Leave Atlanta, Ga., at 6:30 P. M. "Dixie Limited."

June 29th—Arrive Chicago at 2:35 P. M., leaving via the C. & N. W. R. R., at 6:30 P. M. Party convenes at Chicago & Northwestern Station.

June 30th—Arrive St. Paul at 7:05 A. M. Auto sightseeing tour of the city. And leave Minneapolis at 11:40 A. M. via Soo Line.

July 1st—Enroute.

July 2nd—Arrive Banff, via the Canadian Pacific line at 8:05 A. M. Automobiles will meet us upon our arrival and take us for a trip, visiting Bow Falls, Tunnel Mountain,

Buffalo Park and the Zoo, the Cave and the Basin, and the golf links. The afternoon will be at disposal of the tour members. Sleeping accommodations will be provided in our special Pullman car..

July 3rd—At Banff. A motor trip in the morning will take us to Johnston Canyon with a 45-minute stopover there. There will be frequent opportunities to see wild life. Automobiles will take us to Lake Louise.

July 4th—At Lake Louise. A wonderful motor drive of 22 miles into the heart of the main part of the Rockies, visiting Moraine Lake and the Valley of Ten Peaks.

July 5th—Leave Lake Louise via the Canadian Pacific at 9:55 A. M.

July 6th—Arrive Vancouver at 7:45 A. M. connecting with steamer leaving at 10:30 A. M. for daylight sail down Puget Sound. Arrive Victoria at 2:30 P. M., where automobiles will be waiting to take us for a sight-seeing trip about the city, returning us to steamer in time to sail at 4:30 P. M. Arrive at Seattle 8:30 P. M., and leave via Union Pacific Line at 11:15 P. M.

July 7th—Arrive Portland at 6:15 A. M. Room with bath at Hotel Multnomah or Imperial.

Optional Return No. 1-A.

July 12th—Leave Portland via Northern Pacific at 8:00 P. M.

July 13th—Enroute.

July 14th—Arrive Gardner at 11:15 A. M., where connection is made for auto tour consuming 4 1-2 days through Yellowstone National Park. Stopovers will be made nights at Mammoth Hot Springs, Old Faithful and Canyon Lodges. Our exit via Cody Road will be a fitting climax to this delightful tour.

July 18th—Leave Cody via the Northern Pacific at 8:30 P. M.

July 19th—Enroute.

July 20th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."

July 21st—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 2-B

July 12th—Leave Portland via S. P. & S. R. R. at 8:00 P. M.

July 13th—Arrive Glacier Park at 9:12 P M., stopping at Glacier Park Hotel. A 3-day tour of the Park, dividing our time between Many Glacier Hotel, Going-to-the-Sun Chalet and Glacier Hotel.

July 16th—Leave Glacier Park via Great Northern at 9:12 P. M.

July 17th—Enroute.

July 18th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."

July 19th—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 3-C.

July 12th—Leave Portland via Union Pacific at 4:00 P. M.

July 13th—Enroute.

July 14th—Arrive West Yellowstone at 7:30 A. M., connecting with motor coach for 4 1-2 day tour of Yellowstone National Park, stopping over nights at Old Faithful, Grand Canyon and Mammoth Hot Springs Lodges.

July 18th—Leave West Yellowstone at 7:00 P. M.

July 19th—Arrive Salt Lake City at 7:30 A. M. Automobiles will take us for trip around city and visit will be made to the Mormon Tabernacle. Luncheon will be served at the Utah Hotel. The afternoon will be at disposal of members, and leave Salt Lake City via D. & R. G. R. R. at 6:00 P. M.

July 20th—Pass through the Royal Gorge in the early afternoon. Arrive Colorado Springs at 6:20 P. M.

July 21st—Automobiles will take us for a trip to the Garden of the Gods, Cave of the Winds, and Seven Falls. Leave Colorado Springs via Rock Island Lines at 8:30 P.M.

July 22nd—Enroute.

July 23rd—Arrive Chicago at 6:59 A. M. and leave at 10:00 A. M. via "The Flamingo."

July 24th—Arrive Atlanta, Ga., at 8:40 A. M.

Optional Return No. 4-D

July 12th—Leave Portland via Southern Pacific at 9:00 P. M.

July 13th—Enroute.

July 14th—Arrive San Francisco at 7:50 A. M., stop at St. Francis Hotel.

July 15th—Leave San Francisco via Southern Pacific at 8:00 P. M.

July 16th—Arrive Los Angeles at 9:30 A. M. Room with bath at Hotel Clark. Auto tour to Hollywood and the beaches included.
July 17th—Leave Los Angeles via Santa Fe R. R. at 12:01 P. M. (Noon.)
July 18th—Arrive Grand Canyon at 8:20 A. M. Breakfast, luncheon and dinner at El Tovar Hotel. Auto drive along Hermit Rim Road. Leave Grand Canyon via Santa Fe at 7:35 P. M.
July 19th and 20th—Enroute.
July 21st—Arrive Chicago at 10:00 A. M., and leave at 2:00 P. M. via "Dixie Limited."
July 22nd—Arrive Atlanta, Ga., at 8:55 A. M.

Optional Return No. 5-E
This comprises direct return to Atlanta by rail.

Optional Return No. 6-F
This comprises return to Atlanta by rail via San Francisco

Prices

Atlanta to Atlanta—Tour No. 1 and 1-A	$355.00
Atlanta to Atlanta—Tour No. 1 and 2-B	345.75
Atlanta to Atlanta—Tour No. 1 and 3-C	383.00
Atlanta to Atlanta—Tour No. 1 and 4-D	370.40
Atlanta to Atlanta—Tour No. 1 and 5-E	250.25
Atlanta to Atlanta—Tour No. 1 and 6-F	266.50

Itinerary to Portland and six optional returns from Portland include all cost of transportation, Pullman, hotels and meals to Portland; room in one of the best hotels at Portland while there; transportation, and Pullman with meals at Yellowstone Park on return. On return trips 5E and 6F only rail transportation is included.

For reservations address: American Express Company, 91 Luckie St., N. W., Atlanta, Ga. *Or* Medical Association of Georgia, 139 Forrest Avenue, N. E., Atlanta, Georgia.

Ergosterol Derivatives

Among the ergosterol products manufactured by Mead Johnson & Company the following are of particular interest to medical research workers, biochemists and physicians:

ERGOSTEROL, Spectroscopically pure

ERGOSTEROL, Purified, 98-99%, for irradiation

ERGOSTERYL ESTERS

The development of an improved yeast, and of efficient methods of extraction, enable us to offer purified ergosterol crystals (not activated) at $1.50 per gram.

[*A similar advertisement appeared in the Journal of Biological Chemistry in January, 1928*]

Mead Johnson & Company

Evansville, Indiana

THERE'S A LURE
(Continued from page XIII)

picturesque part of America. Here are basins carved by glaciers, in whose snowy depths lie blue lakes; peaks crowned with ice; waterfalls that plunge a thousand feet or more; and over all the majectic of silence of the Rockies. We arrive in Chicago July 18th; southern and eastern cities on the next day.

Optional Return Trip No. 3-C

Also visits Yellowstone National Park. We tour through Salt Lake City in automobiles and visit the Mormon Tabernacle. We pass through the Royal Gorge, the Garden of the Gods, Colorado Springs, Cave of the Winds, and all those other marvels of the west that are well-known the world 'round. We arrive in Chicago July 23rd; east and south on the 24th.

Descriptions of other optional return trips on request.

FOR SALE—Ophthalmometer and stand, perimeter and stand, extra vial case, Snelling's test chart, phorometer and wall bracket. For further information, address "B," care the Journal.

WANTED—By middle-aged, active physician in good standing, desirable location to practice, either alone or with a reputable physician. Address "H," care of the Journal.

AWTRY & LOWNDES
FUNERAL DIRECTORS,
AMBULANCE SERVICE

Lac-Bismo
(HART)
See Description, Journal A.M.A.
Volume XLVII, Page 1488.

A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water.

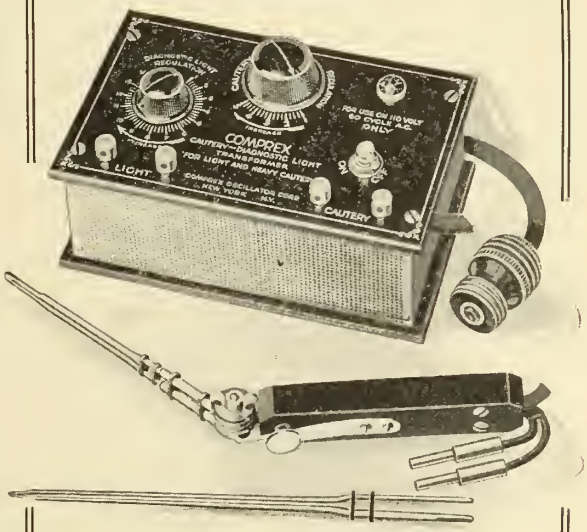
Each fluidrachm contains 2½ grains of the combined salts in an extremely fine state of subdivision.

MEDICINAL PROPERTIES: Gastric Sedative, Antiseptic, Mild Astringent and Antacid.

INDICATIONS: In Gastro-Intestinal Diseases, Diarrhoea, Dysentery, Cholera-Infantum, etc. Also suitable for external use in cases of ulcers, etc.

E. J. HART & CO., Ltd.
Mfg. Chemists
New Orleans

COMPREX
COMBINED CAUTERY AND DIAGNOSTIC LIGHT TRANSFORMER



A complete Major and Minor Cautery weighing only 4½ pounds

Complete With Two Electrodes $45.00

For treatment of warts, moles, cervical erosions endocervicitis, hemorrhoids—in fact it covers the entire field of cautery, both major and minor duty and provides safest and quickest method of removing any growths or sterilizing any infected areas.

With this Transformer a headlight or other diagnostic light may be operated while cauterizing, as is necessary in cervical and rectal cautery, etc. The current for both diagnostic light and cautery is ground free—hence will not give disagreeable and dangerous shocks to patient or operator. The light current is not affected by the cautery current, thus preventing lamps from burning out when the cautery current is turned off. The fact that both handle and card may be sterilized by boiling (unique in an outfit of moderate price) permits its use for abdominal operations as well.

Fill In Coupon and Send to

SURGICAL SELLING CO.
139 FORREST AVE., ATLANTA, GA.

Without incurring any obligation I would like to have the Comprex Cautery and Diagnostic Light outfit demonstrated at my office.

Name .....

Address .....

WANTED—We have several young men and women well trained as practical laboratory technicians graduating from our School of Public Health. Physicians, surgeons, hospitals, clinics and health departments desiring such service can secure it by writing immediately. Address Dr. L. H. South, Director, Bureau of Bacteriology, Kentucky State Board of Health, 532 West Main Street, Louisville, Ky.

No Starch

Listers

CASEIN-PALMNUT

Dietetic Flour

Starch-free Diabetic Foods that are appetizing are easily made in the patient's home from Listers Flour. It is self-rising. Ask for nearest depot or order direct.

LISTER BROS. Inc., 41 East 42nd St., NEW YORK

Announcing

Beginning October 1, 1929, MRS. SAINT JULIEN CULLUM will be qualified to teach the NEW GRADED KINZIE METHOD of Speech Reading

STUDIO OF SPEECH READING
510 GREENE STREET
AUGUSTA, GEORGIA

Accurate digitalis dosage by mouth

DIGITAN TABLETS

CONVENIENT STANDARDIZED DEPENDABLE

Sample sent upon request

MERCK & CO. INC. Rahway, N. J.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII June, 1929 No. 6

THE PROBLEM OF FEEBLE-MINDEDNESS*

NEIL A. DAYTON, M.D., ††*,
Boston, Mass.

The speed and competition of present day life make it increasingly difficult for mentally handicapped individuals to succeed. This fact partially accounts for the increasing number of mental defectives who are daily coming to our attention. What are some of the facts in reference to feeblemindedness? The purpose of this communication is to outline a few principles which may be of service in answering some of these questions.

I shall first give you the definition of feeblemindedness which has been adopted by the American Association for the Study of the Feebleminded. It is as follows: "The term 'feeble-minded' is used generically to include all degrees of mental defect due to arrested or imperfect mental development, as a result of which the person so afflicted is incapable of competing on equal terms with his normal fellows or managing himself or his affairs with ordinary prudence."

Nowadays, human beings are regarded as having a mental age as well as a chronological age. That is, a child may be ten years old according to the year of his birth, but have a mental age of only six years. Thus, he is four years mentally retarded.

Tests to determine mental age are a fairly new development in the field of psychology. They date back to 1908 when the pioneer work of Drs. Binet and Simon was first made public. Binet devised a series of tests for children between the ages of 3 and 12, the children of each age having a definite group of questions to answer. These questions were first tried out on thousands of boys and girls before the set for each age was definitely standardized. After that it was generally conceded that the failure of a child to answer successfully the questions propounded for his age group was evidence of an under-average mentality.

Now when a child is given a mental test which he answers to the best of his ability, he is given a grading of mental age. He is also given an I.Q. rating. I.Q. stands for intelligence quotient and is the mental age of the child divided by his chronological age. I. Q.'s range from 0 to over 100. The intelligence of the average human being is regarded as between 90 and 110 I.Q.

To illustrate how this system works I shall give you an example. A child of 12 years may be given a test which is the average for 6-year-old children. If he passes this, he is then given the test for 7 year olds.

He may pass this also, and the test for 8-year-old children. But suppose he fails the test for 9-year-olds. Then, his mental age, in spite of his 12 years is shown to be that of an 8-year-old child. His intelligence quotient, that is his mental age, divided by his chronological age, or (8 years÷12 years) becomes .66. As the present level for mental deficiency is placed at an I. Q. of .75, he is classed as mentally defective, provided that other factors, psychiatric, medical, sociologic or pedagogic, do not negativ ate the results of the psychologic tests.

The question is often asked: "Just what do these intelligence tests include? Because arithmetic or reading is hard for a child will he suffer in the tests?" You may answer this question for yourself after I quote some of the questions asked on the tests. They range from simple ones like "When is your

*This paper is one of a series of radio talks on mental diseases which were presented to the public by the American Psychiatric Association at the annual meeting held in Atlanta, Georgia, May 13, 14, 15, 16, 17, 1929.

†Director of Research, Massachusetts State Department of Mental Diseases, Boston, Massachusetts.

†*The writer was assisted in the preparation of this paper by Helen H. Dolan, S. B., Assistant in Research.

birthday?" "Where do you live?" and "What does your father do?" to more difficult ones, such as "How old are your brothers and sisters?" "Who is the Governor of Georgia?" and "How long is this pencil?"

These simple questions are often answered in weird ways, and many times the answers are irrelevant. They are, however, answered promptly and correctly by normal children. In this way we feel that the child's intelligence is found in a fair way. Of course, the questions always vary and are modified to suit the particular child.

Now we have three main groups of mental defectives. First, there are the *idiots*, who have a mental age up to three years and whose I. Q.'s are .25 or less. Next are the *imbeciles* whose mental age ranges between 3 and 7 years and whose I. Q.'s range between .25 and .50. And last are the *morons* whose mental age is between 7 and 12 years, and whose I. Q.'s range between .50 and .75.

The idiot, as you can readily see, is the lowest type of mental defective and requires nursery care practically all of his life. His mentality never develops beyond that of a 3-year-old child. He is absolutely helpless, and unable to care for his smallest wants or protect himself in a world of haste. An idiot is a tragic and pathetic misfit in the realm of life. He seldom lives long, however, for as a rule and in spite of care and supervision, the lower the I. Q. the greater is the mortality of this group.

Imbecile children are only slightly better off. Here the mental age ranges between 3 and 7 years. Children of this group may be taught to dress themselves, feed themselves and attend to their own wants, but they, too, require constant care and supervision. *And this is not a matter of a year or years. It is a matter of a life time.* However, some of them are able to assume simple duties and perform them quite well.

Next we have the *morons*, those whose mental ages range from 7 years to 12 years, or nearly normal. The lower grade morons—those with mental age 7 or 8 years—may be taught many useful things, not only in caring for themselves, but in actually being productive in a way and in doing work of a simple nature. Their work requires supervision, of course, and low grade morons usually do best under institutional care. They may become of use to themselves and able to perform many helpful duties about the institution. Nevertheless, few are able to take up life in the community, for they easily develop into serious social problems.

The *high grade moron* whose mental age is that of a 9, 10, 11, or 12 year-old child is a somewhat more hopeful problem, but still a problem. Individuals of this type, although lacking in any high degree of intelligence, may have charm of personality, wit, humor, vigor, cheerfulness and a willingness to do that more than offset any lack of intelligence. Individuals of this type are the most excellent routine workers in the world. Indeed, the late Dr. W. E. Fernald, who devoted his life to the study and care of mental defectives of all grades, classified morons as the backbone of the industrial world, and he is right. Recently, Professor Wilson, of the Yale Medical School, said: "We are coming to recognize that the high-grade moron is perhaps necessary and desirable element in a civilization that involves the performance of many routine tasks unsuited to the mentally alert."

Few of us indeed ever try to understand or sympathize with the point of view of a mentally defective child. A child that is blind excites our sympathy for we know the darkness that enshrouds him and the light that he has missed. Again, the child that is dumb, or deaf or crippled appeals to us sympathetically for we have a greater understanding of the loss that is his. But the little child who is born into a world of significant happenings, who can see, and hear, and speak but yet cannot comprehend—for him we have only curiosity and a feeling of aloofness. Yet to him the loss is everlastingly greater than a physical defect would be and, according to the degree of his mental defect, he is more or less totally dependent upon others for happiness and success throughout his life.

I wonder if many of you know the extent to which mental deficiency exists. Let me tell you a little of the situation as it is

in my state. I shall quote the Massachusetts program because the situation there is more familiar to me. However, the problem in other states does not differ materially.

Now a very important aspect in training mentally defective children is that of realizing the presence of mental defect while the child is still young and able to be trained. A system of *identification* is necessary to isolate mental retardates from normal children and give them immediate training commensurate with their mental equipment. In Massachusetts this is accomplished by means of our School Clinic System. We have a law which makes it mandatory that any child in the public school who is three or more years retarded in his school grades shall be given a complete psychiatric examination.

These examinations are conducted by travelling school clinics which operate from the various state hospitals and state schools. Each clinic consists of a psychiatrist, who does the mental and physical examination, a psychologist who gives the mental tests, and a social worker who obtains the family and personal histories of the child. The school nurse and a local teacher also assist in other phases of the examination which, I may state, is a very complete one. It is called the Fernald 10-point-scale examination and covers, as its name suggests, 10 different fields. The psychiatrist then summarizes the various tests, makes a diagnosis, and renders a report to the Superintendent of the school, where the examinations are being held. This report covers three phases: Educational, Medical and Social, and contains valuable advice with regard to the individual child based on the findings in his case. Parents are always invited to confer with the examining psychiatrist and in this way any personality deviations or conduct disorders in the child which arise from environmental conflicts, can be adjusted.

Massachusetts now has 15 of these travelling psychiatric clinics which visit the public schools at the request of the School Superintendents and examine all children who are referred.

Last year 161 cities, towns and villages were visited and over 6,000 retarded children examined. Over the 14 years of clinic operation 38,000 children have been examined, certain numbers found mentally defective, and these given the benefit of advice by a psychiatrist and suitable training during the formative period of their lives.

The next aspect of our program with regard to mental defectives is that of *registration*. All children who have been diagnosed as feeble-minded by the school clinic psychiatrist or by institutions are registered at the Division of Mental Deficiency, Department of Mental Diseases. This gives us an official census of the feeble-minded of the state, some of whom may be cared for in institutions while others are scattered throughout the community. This sytem of registration is invaluable. The records are, of course, confidential.

A third aspect of the Massachusetts program is that of instruction. Retarded children require instruction of a special nature, for their scholastic performance is limited and their progress slow. Nearly all of our public schools now have special classes with teachers trained to instruct retarded pupils. Special school equipment in the way of books and "workshop" material for industrial and vocational training are used in these classes. As a result of 3 or 4 years of special training, the ordinary moron of 8, 9 or 10 years mentality is able to secure and keep a job at good wages—averaging from $16.00 to $22.00 a week. This special class system has also proved of value to the normal child as he is no longer held back in his progress by a lowered class standard due to the presence of mental retardates.

We have also a system of *community supervision* for mentally defective children who do not need immediate institutional commitment. A certain number of problem cases are referred to the Department of Mental Diseases each year by various social agencies, by the state schools, or by the parents themselves. They are cases whose defect does not warrant institutional care, yet whose social activities must be guarded. A certain number are legally committed to the department for supervision. An attempt is made to guide these boys and girls into channels of

life that will make them productive, sufficient unto themselves, and social assets rather than liabilities. However, it is not always possible for the child to make an adjustment, and if the attempt fails then he may be transferred to one of the state schools where close supervision and care will be available. This system of community supervision also acts in an advisory capacity to the social agencies or to parents with regard to handling their mentally defective problems without court commitment being necessary.

In addition to the supervision offered by the central department, each state school has an active social service department of two or three workers who supervise all children who have been discharged or who are on parole from these schools. They secure positions for them, inspect their boarding homes and are generally helpful in aiding the boys and girls in making a satisfactory community adjustment.

The extra-institutional care afforded by community supervision ensures that those defectives who most need institutional training and protection will be sent to the institution, while those who can live safely and happily in the community will be allowed to do so.

And finally we come to the disposition of cases that must be segregated. These are chiefly the lower grade cases of mental defect, idiots and imbeciles—or the higher grades who have become serious social problems.

Massachusetts has three state schools caring for feebleminded children, their total capacity being approximately 4,100 cases. These institutions are able to care only for those children who most *urgently need* supervision. Although the number of beds in our institutions is increased each year by about 200, the supply never equals the demand. The community need for greater institutional provision for mental retardates is pressing.

Let me tell you a little of the life at these institutions. It is one of varied interests for the child. In addition to regular schooling, for each state school has a full quota of grade teachers, there are classes in occupational and industrial training where everything is done from the sewing and embroidering of linens to the weaving of rugs or suit materials. Each child is allowed to choose for himself whatever phase of industrial activity attracts him the most. It is a pleasure to witness the interest which is taken in this productive work. During the summer months those who are able, are taken home for visits. Those who remain often help in the farming industry of the school, planting, digging and later reaping the fruits of their labors. Periodic outings and excursions are given to the children when they are taken to the beaches or nearby resorts for a day's outing. The institution grounds cover a large area so that there are playground sections with swings, see-saws and other games. There are always many baseball diamonds and it is no uncommon thing to see as many as 8 or 10 baseball games in progress at the same time. Frequently games are played with teams from the other state schools or local high schools.

An ever-constant vigilance over the comings and goings of mental defectives of all grades is absolutely essential, practically throughout life. This is especially true of the higher grade morons who may be stunted in intelligence, but well-developed physically and capable of becoming economically self-supporting. It is practically a "cradle to the grave" supervision that is a very costly item in the community budget. But the financial cost is nothing when compared to the infinite damage that may be done to the social welfare of the community when careful supervision is neglected.

Let me give you one or two examples which demonstrate the outcome when defective boys and girls are not properly cared for.

Dr. Fernald had arranged to admit to his institution an attractive 15-year-old girl of high mental grade who was a sex case. At the last moment the mother refused to send her to the school, as she "could not bear the disgrace of publicly admitting that she had a feeble-minded child." Ten years later the girl was committed by the court after having given birth to six illegitimate children, all feeble-minded. A city supported

this girl at an almshouse several months at each confinement and was compelled to assume the burden of the life-long support of her progeny.

Again, I recently examined a young man of twenty-four years, who left school at the age of fourteen while in the fifth grade. He became a wanderer, working occasionally at odd jobs for small pay. His best job was acting as porter for a woman selling narcotics. He carried the drugs in a brief case and made deliveries after the woman had collected the money. His first arrest was at the age of 16. Over the next eight years he was arrested 35 times for drunkenness, accosting women, larceny, breaking and entering and robbery. The last offense was rape. He had a mental age of eight and a half years. He had gone through the courts 35 times and had been in and out of jail continuously. His last venture, however, netted him twenty years. If we had examined this boy when he was young and in school and had registered him as feebleminded, the fact would have come out at his first arrest. The career of this feebleminded individual, costly to society and to the state, could have been checked in its incipient stage.

The great question for which we must find an answer is this. Are we going to provide adequate schooling and training for our defectives with the thought of making them productive citizens, or are we going to provide more jails and almshouses to care for these handicapped individuals who have become social wrecks later in life? Is our work to be preventive or are we going to stand aside and await the inevitable failure of untrained mental defectives? We can be sure that a constructive program which provides for the early diagnosis of mental defect and for extensive training and supervision of mental defectives is not only valuable, but is an absolute necessity. From our experience at this time, we can say that we know that it will reduce the terrible wastage in child life which results when we neglect those backward mentally. For the future, we can hope to turn more and more of these children back to society as self-supporting and self-respecting citizens.

THE INJECTION TREATMENT OF VARICOSE VEINS*†

C. E. RUSHIN, M.D.
Atlanta

The treatment of varicosities of the leg with their various, and oftentimes diabling results, has been an ever-present source of worry to the men of the medical profession.

For the past 15 years a number of European physicians have been treating varicose veins of the leg by the injection of sclerosing solutions. Originated by Linser of Germany, in 1912, and later popularized by Sicard, of Paris, the method is gradually replacing the operation of varicotomy in these countries, as well as in Austria, Sweden and Denmark. Recently several papers have appeared in England, and a number in America.

I first became interested in the treatment October, 1927, and since then have treated two hundred cases—about half of these were private patients and the other half were patients seen at the Emory Unit of Grady Hospital.

Oftentimes patients with large varicosities have little or no discomfort and then again, patients with veins of the same size and location, suffer a great deal of pain. The best explanation of the cause of the pain is the increased tension on the terminal nerve filaments as they penetrate the skin. Patients often complain of rheumatism in the knee and calf of the leg when in reality the pain is due to varicosities.

Anatomy

The long saphenous vein with its collaterals is the one usually involved. Most often the varicosity begins just internal to and below the knee, next about the middle of the lower leg internal, then about the ankle. The short saphenous forms over the upper part of the calf and extends upward joining the deep system above the popliteal space. There is often a large varix over the patella and another above this on the inner side of the leg

*Read by title before the Medical Association of Georgia, Macon, Georgia, May 10, 1929.

†From the Surgical Department of Emory University.

Figure I-A
Case No. 1. Mrs. V. R., age 35, before treatment.

Figure I-B
Case No. 1. Mrs. V. R., age 35, two months after treatment was begun. This patient was treated with 50% sodium salicylate.

and one of the superficial group below Poupart's ligament.

The Venous Circulation of the Legs

The venous circulation of the legs may be summed up as follows:

In the upright position, the veins of the legs must transmit blood to a considerable height and against a considerable resistance. They are aided very little by the suction action of the heart-beat and respiration; and the abdominal veins having no valves, transmit to their tributaries below, the weight of a considerable column of blood, a weight which is augmented whenever intra-abdominal pressure is increased. The veins of the legs are furnished with valves which divide them into a consecutive series of segments and which permit blood to flow only to the heart. Arterial pressure is so freely transmitted through the capillary bed as to have comparatively little influence, in the erect position, in forcing venous blood toward the heart. The blood poured into the vessels by voluntary muscular movement, which alternately compresses and releases the segmented veins. Valvulo-muscular mechanism of the deep veins is remarkably efficient; the valve-mechanism of the superficial veins is relatively inefficient; therefore, varix occurs only in the superficial veins.

Etiology

The etiology is nearly always explainable on an obstructive basis. Obstruction may be due to several causes:

1. Pressure due to tight garters about the knee.

2. Obstruction developing at the oval window in the fascia lata of the thigh where the superior edge seems to cause an obstructive band above, and the inferior cornu resting under the superficial saphenous causes pressure below as this vein joins the femoral.

3. By obstruction above Poupart's ligament which would mechanically cause retardation of the return venous flow as pregnancy, constipation, tumors of the pelvis causing obstruction to either one or both iliac veins, and occupation requiring patients to be on their feet for a long period of time.

Figure 11-A
Case No. 2. Mrs. C. A. G., age 62. Shows an ulcer on the anterior surface of the leg, also some scars where varicose veins had been excised several years ago. There were very large varicosities in the thigh extending to the anastomosis of the long saphenous vein with femoral.

Figure 11-B
Case No. 2. Mrs. C. A. G. Ulcer is healed and all the varicose veins are sclerosed. 40% sodium salicylate was used.

The endocrine glands are, also, thought to be a causative factor.

Pathology

Pathological changes in the veins: The solutions injected do not have any coagulating effect on the blood. There is at first an irritation of the endothelium with congestion and proliferation. The fibrin of the blood is deposited on the walls of the vessels, adhering to the entire surface of the injured endothelium. In the third stage, sclerosis sets in gradually and atrophy of the entire vessel takes place. The process of chemical irritation is entirely different from the process of infectious irritation of the vein called phlebitis. Sicard and Forrester (1) have called this irritation venitis. Phlebitis may give rise to embolism; venitis has no tendency to do so.

Solutions Used

1. Fifteen per cent to twenty per cent Sodium Chloride Solution: This solution can be used in amounts of five to ten cc at each site of injection. The sole objection is the cramp-like pain which usually lasts about one minute. The salt solution should never be injected into the perivascular tissues. Repeated aspiration should be made during the process in order to determine that the needle is still in the vein. If there is doubt, stop at once as the solution in the tissues might cause a slough.

I have discontinued the saline because of the large amount of solution necessary to inject and the complete failure to obliterate the veins in some cases, even after repeated injections.

2. Twenty per cent to fifty per cent Sodium Salicylate: This solution has been used as much, if not more, than any others. Sicard of Paris has done the most work with this preparation. The danger of a slough is the same as with the saline. When using this solution it is a good idea to have a syringe with 10 cc of normal saline ready; this can be injected into the perivascular tissues if any of the sodium salicylate gets out of the vein. This will usually prevent a slough.

This solution in fifty per cent strength has proven very successful. In no case has it failed. Twenty-five per cent sodium salicylate does not cause as severe pain as the fifty per cent solution, but one injection of it will not always cause obliteration of the vein. Not more than five grams should be given at one time.

3. One per cent mercuric chloride: The difference between the effective and the fatal dose is too small to make it safe.

4. Fifty per cent to sixty-six per cent glucose: The solution is non-toxic and is used by several European physicians.

5. Calorose: This is an invert sugar which is thin, causes no pain and has given good results. It is being used extensively in Vienna. I have used it in fifty per cent and seventy-five per cent strength.

6. Quinine Hydrochloride 0.4 gram; urethane 0.2 gram, and distilled water, 3 cc has been used. Forrester (2) reports that a general weariness is felt for one or two weeks after giving this solution.

I have used it in three cases, all women, two of them had severe uterine cramps lasting several hours. One began menstruating after the treatment even though it was ten days since her last menstruation. One of my colleagues had a slough after using this solution.

Technique

1. Examine the patient carefully, using the Trendelenburg test. This will determine if the deep veins are occluded and, if they are, then the destruction of the superficial veins would be interdicted. Another method of determining the patency of the deep veins is to bandage the leg from the toes up, and if there is no pain with the bandage on, the deep veins are open.

2. Select the site of injection. Always begin at the upper edge of the varicosity.

3. Sterilize the skin with alcohol.

4. Posture of the patient. Three postures are available for injection: Standing, sitting or lying down. I have discarded the use of tourniquets. The recumbent position is more desirable because the muscles of the leg are relaxed, the veins are not filled with blood and the solution comes in contact with the endothelium in greater concentration. This position is the most favorable to prevent the penetration of the caustic liquid into the deep veins. I sometimes inject while patient is standing in order to locate the small veins. After the injection is completed the leg is put in the horizontal position.

5. The Luer lock syringe with rings on the barrel and plunger is more convenient because it is easy to aspirate at frequent intervals to be sure that the needle is still in the lumen of the vein.

6. Use a small No. 26 guage hypodermic needle. It is better to use a new one.

7. Be sure the needle is in the lumen of the vein, if not do not inject, let that particular vein go until another time.

8. Do not inject under too much pressure as it may rupture the vein or cause oozing after the needle has been removed.

9. Leave needle in one minute after injection and as soon as the needle is removed put firm pressure over the site of injection.

10. Apply a four-inch ace bandage extending from the toes to the knee. The bandage is worn two days and is taken off and reapplied and worn two days longer. The firm pressure over the site of injection will often cause the walls of the veins to become agglutinated.

11. The number of injections will depend upon the case in hand. As much as 20 cc of a twenty per cent solution of saline has been given at one time without any ontoward effects. In using sodium salicylate, I use 4 cc of forty per cent or fifty per cent solution, injecting one or two cc at each site.

Treatment

The old and established treatment of varicose ulcers has been an attempt to sterilize them locally, followed by a supporting bandage to the leg to avoid stagnation.

For years in the Gray Clinic we have used Unna's paste dressing, adhesive plaster dressing and rest in bed. The ulcer usually healed after several months treatment, but returned soon after the patient resumed work.

In the treatment of varicose veins three things must be considered. First, removal of the cause; second, the destruction or removal

of the varicose veins; and third, the preservation of the deep veins.

The importance of the ambulatory treatment is the great advantage of the injection over the operative method.

There are several objections to the operative method.

1. There is no assurance that the varicosities will not recur after the operative method even when a thorough "job" has been done. If there should be other veins which became dilated after the injection treatment it would be very easy to inject these veins.

2. McPheeters and Rice (3) discuss the complications and review the mortality literature in connection with injection treatment. In their search of the literature they located seven deaths in about 53,000 cases—a mortality of 0.002 per cent. In these seven cases, sodium chloride was used in three and mercurial preparations in two. No mention was made of the remaining two cases. Kilbourne (4), after a careful survey of a series of 4,607 cases shows that the mortality by operative excision in America is one in 250. Recurrence after operation is thirty per cent and after injection six per cent.

3. After operation the patient must be confined to the bed. Upon getting up the feet swell and remain swollen for several weeks.

4. Operative scars are unsightly.

5. The anesthetic, pain and discomfort of the dressing is much greater annoyance than the cramp-like pain following the injection.

Immediately after the injection of the sodium salicylate a cramp appears, not only at the point of injection, but all along the limb; the cramp lasts from one to two minutes and then disappears. At that time there may be noticed a local constriction of the vein. As a rule two days elapse before the actual phenomena appears at the level of the vein. At the end of this period the vein becomes slightly painful and sensitive to pressure, and starts on its sclerosing reaction.

There may be three degrees to this reaction.

1. Simple parietal sclerosis in which the walls thicken without obliteration of the vessel.

2. Sclerosis with obliteration in which the vein becomes hard and loses its lumen after a few days, turning into a solid cord.

3. Obliterating sclerosis with perivenitis. In this case the inflammatory reaction has reached the three coats of the vessel; the solid cord is pink, swollen and painful.

To determine how the liquid injected into the venous system of the leg is distributed, certain investigators have resorted to radioscopy and radiography. Jentzer (5) of Geneva, has carried out this investigation by means of twenty per cent strontium bromide solution, and has shown that in varicose veins the liquid follows a course opposite the ordinary flow of blood, which in his opinion, explains the absence of embolism.

Sicard and Forrester (6) have injected iodized oil into varicose veins under the fluroscopic screen; they have found that the flow, if not reversed, was at least much slower, and that the liquid injected into the superficial net work of the veins did not show any tendency to reach the deep veins when the patient was in the recumbent position, but as soon as the patient is asked to perform muscular movements of the calf of the leg, it is possible to see suction take place from the surface toward the deep veins. The practical inference from this is that the solution should be injected while the limb is at rest and the limb must be left during a certain time in the extended position in order that the sclerosing action may be limited to the surface as desired.

Contraindications

Old people with enfeebled health should not be injected. A previous medical examination is necessary, particularly as to the condition of the heart, the kidneys and the possibility of diabetes.

The treatment should not be administered in cases of varices accompanied by extreme edema of the lower limbs: in these cases the deep veins would not improve the circulation. Patients who have recently had phlebitis should not be treated. Varices accompaning pregnancy should not be treated by this method. However, if the varices do not

disappear sometime after pregnancy these cases may be treated. The treatment should not be given in collateral varices, consisting of large dilatations located at the root of the limbs.

Results of the Treatment

Treatment of varices by injecting sclerosing solutions gives good results in the majority of cases; the curing of pronounced cases is effected within three to five weeks, by means of harmless and only slightly painful reactions. The patient is not confined to the bed. In a few cases recurrences occur, not in the obliterated veins but on varicose sections appearing after the injections. Not only does the treatment cause the unsightly veins to disappear, but it also does away with the sensation of heaviness and pain in the limbs.

Because of the simplicity and harmlessness, the treatment of varicose veins by sclerosing solutions is certain to take precedent over surgical measures.

BIBLIOGRAPHY

(1) J. A. M. A., June 16, 1928, Page 1932—Forrester.
(2) J. A. M. A., June 16, 1928, Page 1932—Forrester.
(3) J. A. M. A., October 13, 1928—McPheeters and Rice.
(4) J. A. M. A., April 20, 1929—Kilbourne.
(5) J. A. M. A., June 16, 1928—Jentzer quoted by Forrester.
(6) J. A. M. A., June 16, 1928—Forrester.

THE TREATMENT OF PROCIDENTIA UTERI*

OLIN S. COFER, M.D.
Atlanta

Procidentia uteri is usually considered as only a degree of uterine prolapse, in which the uterus has in whole or in part extended beyond the vulvar cleft.

In order to properly select the operative procedures necessary for relief, it is essential that the forces through which an abnormal and disabling mechanism has been substituted for the dynamic forces devised by nature, be carefully analyzed. The heaviest object may be easily and freely movable if only the delicate balance and equalized pressure be maintained, and the deflection compensated by the position of the fulcrum and its lever.

Except in congenital malformation, prolapse of the uterus, its appendages, and adjoining organs, can only occur when these supporting structures have been altered by injury to their functioning mechanism, therefore in applying measures for the relief, these forces must again be made to function.

There can be no question but that the first requisite is the restoration of the diaphragm lying principally below the vagina, and which is formed by the levator muscles and their muscular and fascial investments, so that the delicate balance beginning in the upper diaphragm which lies above the vagina and is formed by the uterus, bladder, and their ligamentous attachments, may again recover its equilibrium.

These intra-pelvic organs are all contained within the upper sling, reinforced by the lower sling; and if these can be placed in their proper apposition, a cure of the prolapse will always be obtained as the intra-abdominal pressure will secure a closure of the vulvar cleft and the deeper lying muscular supports which form the only boundaries of the hernial canal of prolapse.

Before the days of corrective plastic surgery, many cumbersome pessaries and supports were devised for the relief of these sufferers, but all have been relegated to those few cases in which the minimum shock of vaginal operations would be fraught with danger. Probably the best pessary for the largest number of these inoperable cases is the Menge pessary, which will usually secure a limited measure of relief.

Many operations have been originated for procidentia, some of which have only an occasional case to command them; others have long since been consigned to obscurity; a few, with modifications, have stood the test of time and have given satisfactory results in different clinics.

In this discussion, procidentia in which the function of pregnancy is to be preserved is not considered, as these cases are in great minority and are not illustrative of the typical necessary technique.

Following the classification of Crossen, the first group is composed of those operative procedures utilizing the uterus to close the fascial hernia in the vaginal opening and include vaginal fixation of the corpus as practiced by Mackenrodt, Duhrssen, Winter and

*Read by title before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

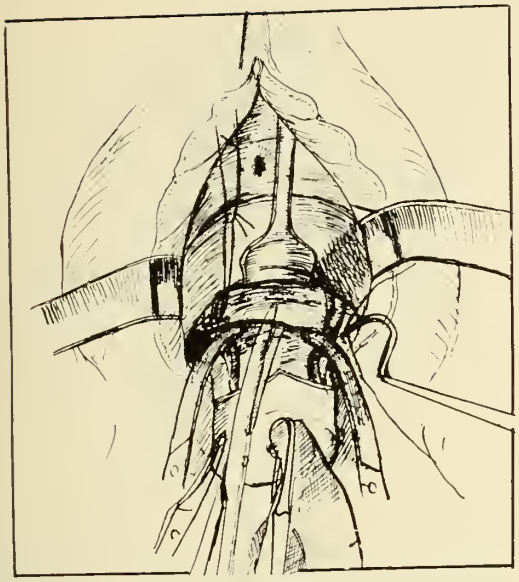


Figure I

Vaginal hysterectomy. Incision through vaginal mucous membrane. Bladder being freed from uterus by cutting utero-vesical ligament. Uterine arteries clamped and being ligated.

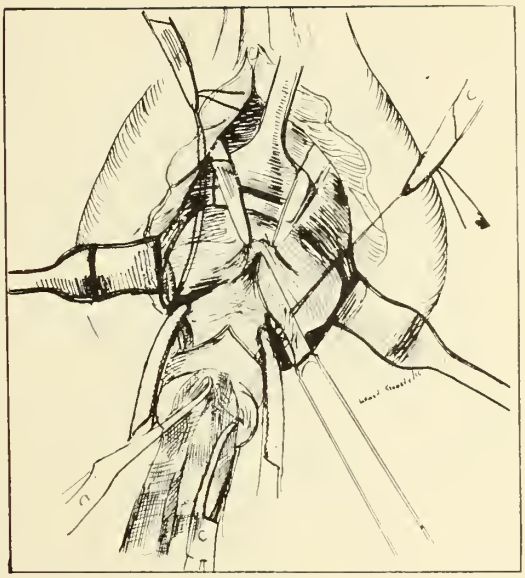


Figure III

Uterine arteries ligated near uterus, anterior vaginal wall and bladder retracted, and peritoneal cavity being opened. Bladder is not separated from anterior vaginal wall until later.

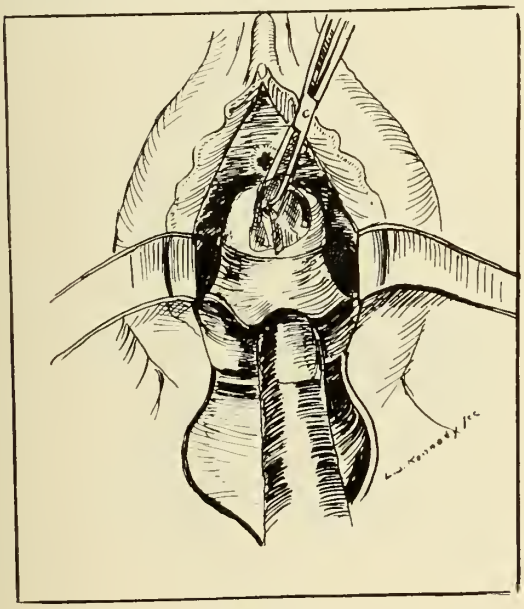


Figure II

Incision carried around cervix and dissection carried to peritoneal reflection in cul-de-sac. Peritoneum may be opened in the midline posteriorly instead of anteriorly, if necessary.

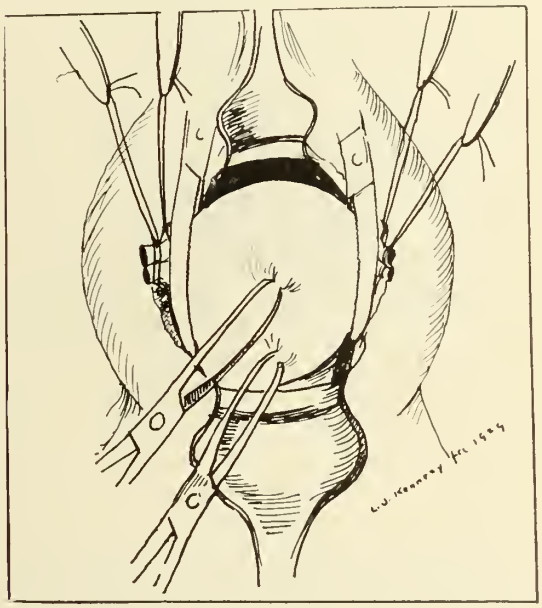


Figure IV

Peritoneal cavity opened, uterine body delivered underneath bladder and broad ligaments ligated from above downward in sections. Round ligament carefully isolated.

others; fixation of the cervix and the widely practiced interposition operation. The vaginal fixation operation only anchored the vaginal wall to the corpus, omitting the interposition of the uterus between the bladder and anterior vaginal wall and, except in mild cases, was not uniformly successful. Other eminent gynecologists, as Landau, fixed the cervix after removal of the corpus well under the bladder, or as recommended by Smith sutured the cervix to the fixed sub-pubic structures. These measures, while eloquently demonstrating the ingenuity in attempting functioning, though not entirely physiological, correction of the acquired deformity, are of historical interest only, and are but rarely practiced. The Sub-Vesi-

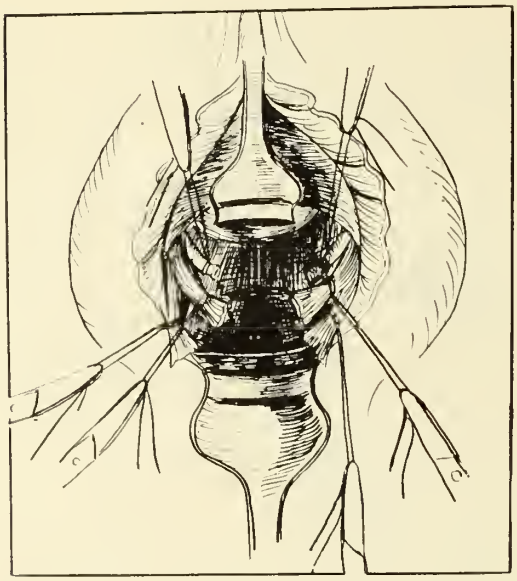


Figure V

Uterus cut away and ligatures left long.

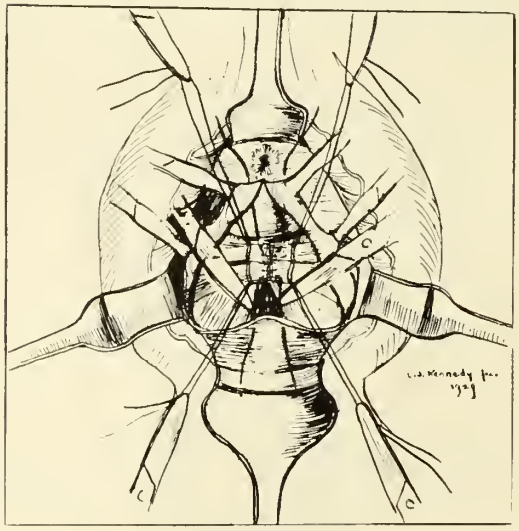


Figure VI

Broad ligament sutured reforming upper pelvic diaphragm. Bladder has been dissected from anterio vaginal wall and excess of vaginal wall trimmed away. Fixation suture of chromic catgut passed through round ligaments and anterio vaginal wall three centimeters below meatus. Fixation suture also passed through broad ligament base and cut edge of posterior vaginal wall to prevent vaginal shortening. Uterosacral ligaments shown clamped and may be plicated if necessary. Uterovesical peritoneal reflection is caught and sutured to the posterior surface of the broad ligament, thereby covering all raw surfaces and closing paritoneal cavity.

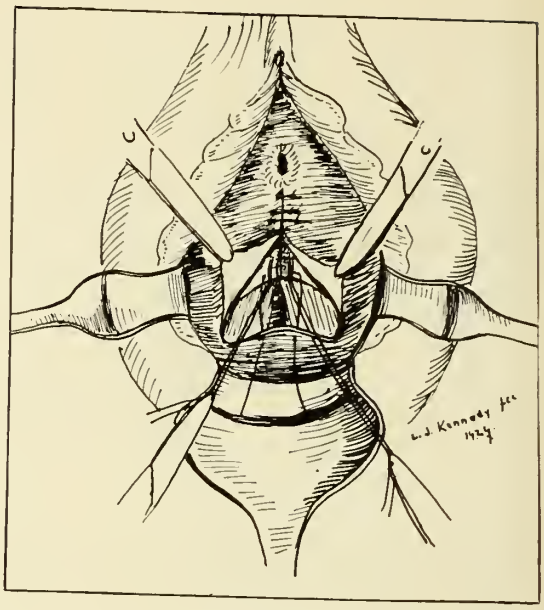


Figure VII

Interrupted vaginal wall sutures partly tied, showing round ligaments fixed to anterior vaginal wall underneath base of bladder. Broad ligament stumps may be overlapped or sutured with mattress stitch if redundant. Stitch fixing posterior vaginal wall and uterosacral ligaments shown, but not tied.

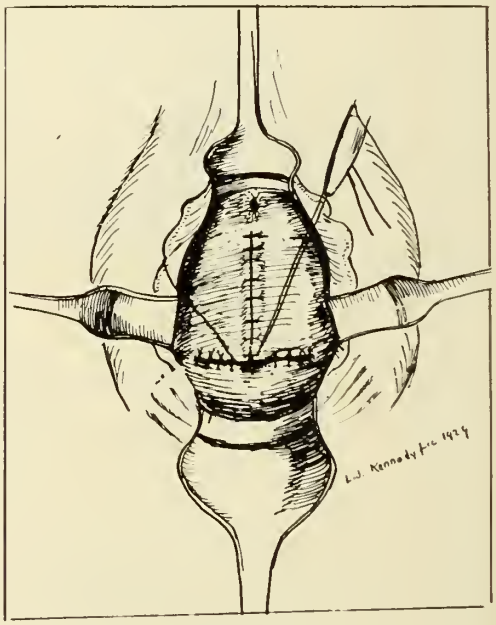


Figure VIII

Shows completed vaginal vault and corrected colpocele. The cut edge of posterior vaginal wall may be sutured to base of broad ligament instead of cut edge of anterior vaginal wall. A wisp of iodoform gauze should be placed in incision if closed as in illustration, but is unnecessary if cut edge anterior vaginal wall is left open.

cal Interposition of the Corpus as originally planned by Shanta-Wertheim, Watkins, and others, is, with slight modifications, the method of choice in the class of procidentia in which it is not necessary to remove the uterus.

Simple vaginal hysterectomy with fixation of the broad ligaments to the vaginal vault is the next sub-head, which was further modified by Goffe, in that the base of the bladder was fastened by three equidistant sutures to the upper broad ligament. These steps, however, did not always count the ever-

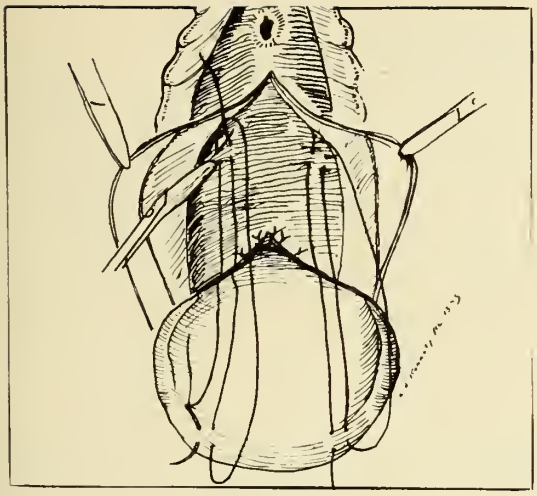


Figure IX

Sub-vesical interposition of bladder shows uterine corpus drawn underneath bladder after usual incision and separation of bladder from anterior vaginal wall and uterus. Utero-vesical peritoneal reflection shown sutured to posterior uterine wall and uterosacral ligaments may be shortened by same suture if necessary. Crossen's stitch, which fixes uterine cornea to fixed subpubic fascia shown.

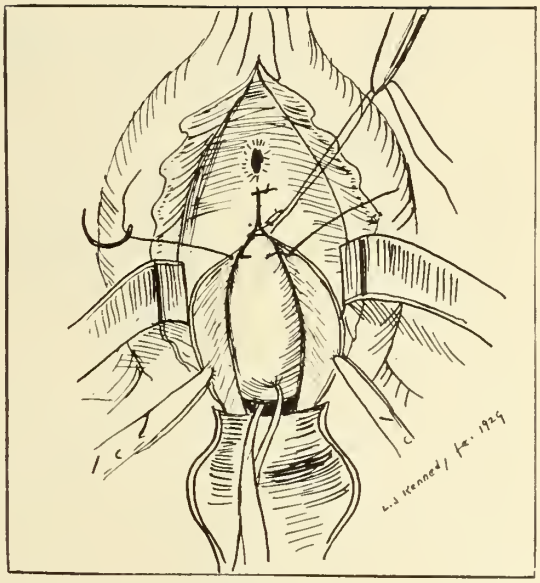


Figure XI

Anterior vaginal wall being closed by interrupted sutures of chromic catgut. No vaginal wall is removed in this operation.

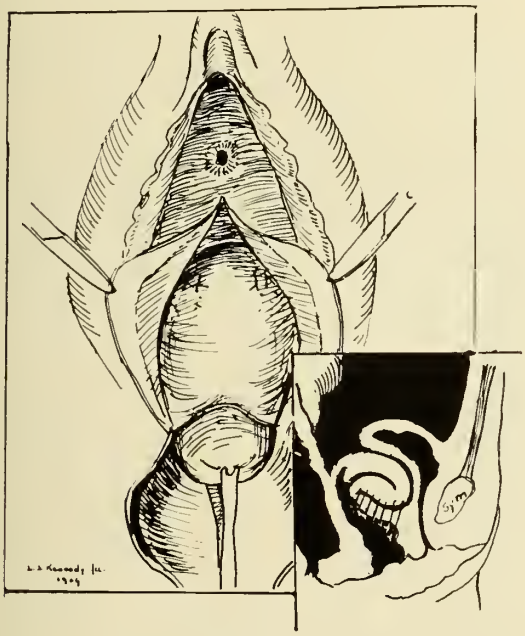


Figure X

Crossen's stitch tied and vaginal flaps ready to be sutured to uterine corpus. Cross section of completed operation insert.

present cystocele and were frequently followed by bladder prolapse, which was as disabling as the original procidentia. This disadvantage was corrected by C. H. Mayo, who sutured the round ligaments to the anterior vaginal wall a short distance below the meatus, thereby placing the bladder behind the broad ligaments instead of in the usual anterior position.

Through the abdominal wall incision, the uterus may be fixed to the abdominal wall according to the different methods of Kelley, Leopold, and Oldshausen, or the cervical stump may be fixed to the aponeurotic structures of the abdominal wall, closing the pelvis by suturing the broad ligament to the parietal peritoneum anteriorly. Complete hysterectomy may be done and the closed vaginal stump fixed to the aponeurosis.

Murphy devised an ingenous operation, in which the uterus was bisected to the internal os after ligation and division of the upper broad ligaments, the mucosa removed and the uterus sutured anterior to the aponeurosis, each half lateral to the incision. Crile has recently advocated a closely allied operation. All these methods of relieving a difficult abnormality have their advocates, but the Sub-Vesical Interposition of the Corpus or vaginal hysterectomy utilizing the low fixation of the round ligaments according to the technique of Mayo will give satisfactory results in most cases; and in addition are attended by a far lower mortality, less shock, and a smoother convalescence than the abdominal route.

There are a few necessary restrictions which are applicable to vaginal section, whether it is contemplated to utilize either the interpo-

sition operation or vaginal hysterectomy; the most important of which are absence of adnexal disease, or pelvic adhesions, and a normal or near normal size of the uterus.

In selecting the operation of choice, it should be remembered that the interposition operation will not be satisfactory if the uterus be either markedly atrophic or enlarged, in that the former will not satisfactorily close the fascial opening and the latter will produce painful pressure symptoms.

It is regretted that time will not permit a separate analysis of the final results in the cases upon which this report is based, but since the Mayo technique has been followed in hysterectomy cases, and the field for the interposition operation restricted there has been no complete failure in relieving the symptoms.

The selection of the vaginal route entails a more thorough knowledge of the mechanism involved, requires more painstaking dissection of pelvic structures, and cannot be hurriedly or carelessly performed, but is abundantly compensated by the low mortality and the excellent results obtained. These cases are almost always patients of advanced age and decreased vitality, in whom the flame of life burns but dimly, and if subjected to the shock of extensive abdominal surgery will frequently succumb. Unless one has repeatedly noted the almost entire absence of shock usual to vaginal celiotomy in contra-distinction to the stormy convalescence of abdominal section, he might be skeptical as to this assertion, but when observation of a fair series of cases has amply proven the truth thereof, I believe but few surgeons would accept the formidable mortality necessary to abdominal correction in perference to the lower one of correction by a modified restoration of the mechanism involved.

Conclusions

1. Either vaginal hysterectomy by the method of Mayo or Sub-Vesical Interposition of the corpus can be applied to 85 per cent of procidentia uteri as the method of choice for correction.

2. Vaginal celiotomy, while more difficult to perform, carries an almost neglible mortality and almost invariably secures satisfactory results.

3. Simple vaginal hysterectomy or vaginal fixation of the corpus without interposing the uterus between the bladder and vaginal wall will not be successful in most instances.

4. All prolapse operations, regardless of the method utilized, are useless unless the perineal support is properly restored.

139 Forrest Ave., N. E.

ALLERGIC REACTIONS*

Croup, Coryza and Bronchitis As Allergic Reactions In Children

LEE BIVINGS, M.D.
Atlanta

It is the purpose of this paper to bring to your attention the relationship of allergy to some of the more common conditions met with in the handling of the every day diseases of children.

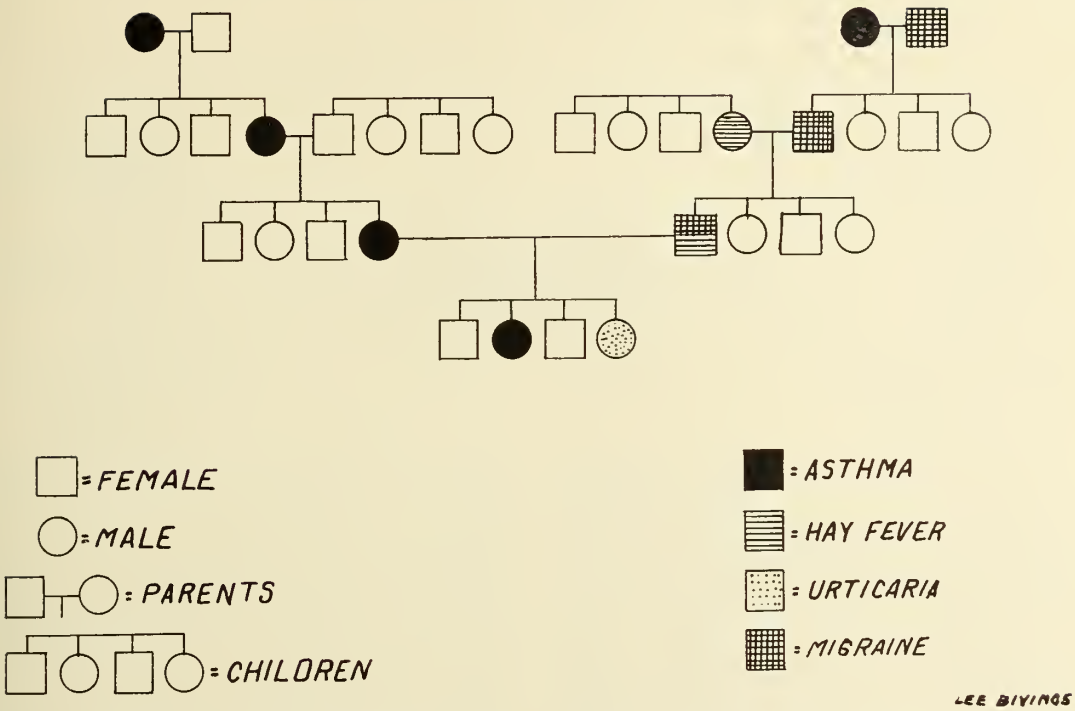
There will be no radical claims that allergy is to blame for all the symptoms to be discussed, perhaps only a small percentage of the total, but an understanding of the part it plays will no doubt add one more method to our equipment for the proper handling of such conditions.

Cooke (1) defines allergy as the reaction occurring in individuals, naturally hypersensitive, on the absorption of a specific substance. Kolmer (2) defines it as a state of altered reactivity of the body cells. Cooke and Vander Veer (3), after exhaustive study, state that allergy with clinical manifestations occurs in approximately 10 per cent of all human beings. Balyeat (4) makes a similar statement after studying hundreds of cases.

Heredity unquestionably plays a leading part in determining the individual who is to become hypersensitive. From a study of the work of Cooke, Coca (5), Vander Veer, Balyeat and others the following conclusions have been reached; that an allergic individual inherits from one or both parental strains an

*Read before the Fulton County Medical Society, April 18, 1929.

CHART NO. 1
INFLUENCE OF HEREDITY IN ALLERGY



altered physiological makeup of the body cells, a tendency to become sensitive to specific substances. It would seem then that the specific substances would be influenced by environment although it is a well known fact that the individual may be sensitive to substances to which he has not been exposed. Peshkin (6) reports a series of a hundred children in which the majority were sensitive to rabbit hair. Balyeat (7) a similar series in which the majority were sensitive to feathers.

Peshkin's patients were of the Jewish race and in New York they use rabbit hair for stuffing pillows and mattresses. It would seem then that substances to which a patient is constantly exposed will most likely be the ones to which he will develop a sensitization. Chart No. 1 shows how the allergic state passes down from generation to generation, though the type of symptoms through which it expresses itself may change from one generation to another. For instance, a father may have asthma while his son may have eczema or chronic bronchitis.

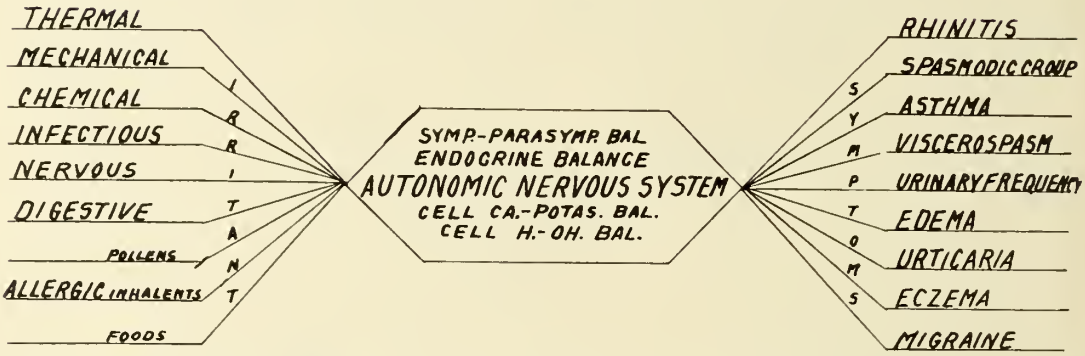
You will notice that asthma has been referred to quite frequently in this connection, the writer assumes that the following symptoms are at times indicative of an allergic state, namely coryza, croup, hayfever, asthma, vomiting, diarrhoea, constipation ,urticaria, eczema and migraine. The scope of this paper is confined to a discussion of coryza, croup and bronchitis.

Allergy has been defined, the relationship of heredity and environment has been demonstrated, we will now take up the manner in which these symptoms come about.

To my mind the autonomic nervous system is the central figure in the expression of symptoms, through its mechanism we can correlate the occurrence of symptoms as a result of a simple morbid reflex on the one hand and as an expression of reacting allergic cells on the other. Chart No. 2 shows this conception. Cohen (8) has published a similar chart except that he does not include the autonomic nervous system as the mechanism for the production of symptoms. It shows how stimuli, from any source, may

CHART-NO. 2

THE MECHANISM OF ALLERGIC REACTIONS



alter the balanced state of the autonomics bringing about a preponderance of activity of the para-sympathetics with a resulting change in the endocrine balance, a change in the calcium-potassium ratio and a change in the H-OH balance of the cell. These changes have all been demonstrated experimentally and upon a knowledge of their existence have been built some of the non-specific treatments for asthma and other allergic symptoms such as the administration of calcium, the feeding of endocrine products, and the use of adrenalin, ephedrin and atropin. They do help the patient temporarily but if there is an underlying immunological reaction with constantly recurring stimuli the only permanent relief must come from the removal of the irritating substance or substances or producing a state of hyposensitization by giving increasing amounts of the specific substances.

The chart also shows how we may have asthma, croup, coryza or other symptoms from many other sources than allergic reactions. Weaver (9) cites instances where almost all the symptoms enumerated may be the result of an emotional upset. Davison (10) reports an instance of an individual who had sneezing attacks when the cecum was distended with fecal matter and was relieved immediately by an enema and subsequent evacuation. The writer has encountered several instances where symptoms could suggest the existence of allergy but which proved to be morbid reflexes. The most interesting was in the handling of two sisters each one of whom had two attacks of asthma, the attack subsiding on every occasion with the eruption of one or more deciduous teeth. Neither child has had an attack of asthma since all temporary teeth have been acquired and there is no history of allergy in the family.

Since asthma and its allied conditions are not clinical entities but symptoms only, it is necessary to go into the underlying principles governing reactions of sensitive individuals. Kolmer (11) believes that the transmission of an unduly sensitive vasomotor system to any irritant or emotion is the hereditary factor in allergy. O'Keefe (12) commenting on the work of Mannaring (13) states that capillary permeability will ultimately be shown to be the dominent fundamental physiological change in protein sensitization to which all other anaphylactic reactions are secondary. Pottenger (14) mentions the calcium-potassium ratio of the cells and the endocrine balance as factors in the production of allergic reactions. Although authorities differ in the exact manner of the production of symptoms the most logical explanation seems to hold the individual cell with its altered reactivity as the fundamental unit, the reaction occurring on contact with the specific substance circulating in the

blood stream perhaps being diffused in increased quantity through the capillary walls, and the reaction expressing itself through the mechanism of the autonomic nervous system.

Coryza to be discussed under this heading is not that of seasonal hayfever but of the perennial type. Such a coryza with its attending congestion is frequently complicated by bacterial infection with resulting sinusitis and other symptoms which may completely overshadow the primary cause. Textbooks teach us that snuffles, in an infant, is due either to syphilis or rickets. Three cases have been under my care, all of whom suffered a great deal during the first year from a chronic rhinitis commonly called snuffles. All were carefully fed and given antirachitic treatment from early infancy and the syphilitic probability ruled out. They did not develop clinical rickets, they were healthy normal babies with the exception of the nasal congestion. Following these children through the first three years of life each one developed eczema in some form and one had severe attacks of spasmodic croup until the skin test revealed a sensitization to feathers. The croup ceased as soon as the feathers were removed from the environment. It is quite evident to us now that all were suffering from an allergic rhinitis which naturally did not respond to treatment which did not include the removal of the specific substances causing the coryza. Cases of seasonal hayfever from pollen sensitization do occur in small children. The writer has one under a year old now under his care.

While we frequently encounter spasmodic croup resulting from an inflamed throat it also occurs as a symptom of allergy and would seem to be more frequent in children who are allergic individuals for the reason that spasm of the glottis or of any of the organs controlled by vague nerve is more likely because of the delicate balance of the autonomic system in these children. Even the sudden chilling of cold air will precipitate an attack in such an individual. Croup may also occur as a reflex through the vagus from a dilated stomach following a heavy meal. The following case history illustrates croup occurring frequently in a child proven to be definitely allergic.

A. L., age 3 years, complained of chronic colds since early infancy with frequent attacks of otitis media. Usual therapy brought little relief, although the general health of the child had remained at a high level. There was a definite history of allergy in the family so it was considered as a possible factor. At the age of 2 1-2 years he had had an erythematous rash about the shoulders and chest which itched severely and at the same time began having choking spells in the middle of the night at which time he would wake with a scream and immediately go into an attack of spasmodic croup. The parents never dared be without a solution of ephedrin which always relieved the croup. Finally he was skin tested and found to be very sensitive to human dandruff and also to wheat among the foods. The skin rash cleared immediately after removal of wheat from the diet and has recurred several times since when he pilfered a piece of bread or cake. In going into the details of the home life it was found that the child slept in a room to himself but that the parents had their dresser at the head of his bed and were in the habit of combing their hair there. The dresser was removed and the room thoroughly renovated. His attacks of croup ceased immediately and so did the nightmares. He has been comparatively free from colds for nearly a year.

The lower part of the respiratory tract may also be involved in allergic individuals with the production of chronic or frequently recurring bronchitis without typical asthma. Such cases are usually due to the inhalation of some specific irritant such as house dust or feathers. Frequently the bronchitis is but a transitional stage later developing into typical asthma or bronchospasm. The three symptoms discussed are frequently if not usually present at the same time. It is a noticeable fact in these children that their general health is frequently very good with the exception of the allergic symptoms.

B. W., age 3 years, had suffered from constantly recurring coryza, croup and bronchitis, the latter occurring with every fresh attack of cold, he had many complications,

sinusitis, otitis media and mastoiditis on one occasion. He did not respond to vaccines or any form of prophylactic treatment. A brother developed pollen hayfever and the patient mentioned was suspected of being an allergic type. Testing revealed a sensitivity to feathers and the removal of all feathers from his home has resulted in freedom from attacks now for the past nine months.

Diagnosis

A careful detailed personal and family history, the thorough elimination of more common causes will leave one in a position to feel that allergy is in the background. Diagnosis is then dependent upon established immunological methods of thorough skin testing correlated with physical and environmental findings. The details are not within the scope of this paper.

Treatment

Should be general as far as the state of health is concerned and then directed at the specific substances. No matter what the symptoms are the treatment is all the same. The removal of the specific irritants or hyposensitization or both.

Summary

Allergy is primarily a state of altered reactivity of the individual body cell, the reaction being elicited by contact with the specific substances, usually through the medium of the circulation. The reaction expresses itself through the mechanism of the autonomic nervous system. The resulting imbalance may be induced by other stimuli than the reacting cell. Whatever the cause of the imbalance, it brings about a disturbance of the endocrine system with changes also in the viscera supplied by the autonomics, altered chemical and biological makeup of the body cells themselves such as changed calcium-potassium ratio. Many attempts at non-specific therapy have resulted from improper interpretation of the underlying cause.

Conclusions

That coryza, croup and bronchitis, particularly when chronic or frequently recurrent, are more often than is commonly believed, symptoms of an underlying allergic state.

That they should not be so considered until all other factors are eliminated unless occurring in a child having a definite family and personal history of allergy.

That the permanent relief depends upon the determination of the specific offending substances by immunological methods with subsequent removal or desensitization.

BIBLIOGRAPHY

1. Cooke, R., Tice's Medicine.
2. J. M. Kolmer—Jn. of Lab. and Clin. Med. July, '28. V. III, p. 905.
3. Cooke and Coca—Tice's Medicine.
4. Balyeat, R. Asthma. 1928 edition.
5. Coca, Arthur F.—Jn. of Lab. and Clin. Med. V. XII, Sept. 1927.
6. Peshkin—Am. Jn. Dis. of Child June, 1926. Vol. 31, p. 763.
7. Balyeat, R.—Jn. of Okla. St. Med. Assn., July, 1927.
8. Cohen, M. B.—Jn. of Lab. and Cdin. Med. Aug., 1928.
9. Weaver, C.—Jn. of Ga. Med. Assn. Feb., 1925
10. Davison, Hal—J. A. M. A., Sept., 1920.
11. Kolmer, J. M.—Same as No. 2.
12. O'Keefe, E. S.—Am. Jn. of Physiol. Sept., 1927.
13. Manaring—Jn. of Immun. Sept., 1926.

THE LABORATORY AS AN AID IN DIAGNOSIS OF DISEASES OF CHILDREN*

BENJAMIN BASHINSKI, M.D.
Macon

Many advances have been made by clinicians in recent years in the study of the blood, urine and feces, the formed elements of the blood, its constituents and especially anti-bodies.

The bacteriological, serological studies of the blood have yielded a wonderful value and is more practical than theoretical. If it were not for the examination of the blood, our knowledge of infection and immunity would not have been built up as it is today. As an example, malaria is no longer a mystery, for with the systematic examination of a stained specimen of blood one can diagnose the condition without any difficulty.

We have found that the morphological methods are very important and of a great aid. Serological methods are being used more and more each day. Much has been learned concerning leucopenia and leucocytosis. Coagulation time has come to be very important especially to the specialist in eye, ear, nose and throat, when preparing a patient for the removal of tonsils and adenoids. One is able to say whether a patient will do well or visa versa during and after operation.

*Read before the Second District Medical Society, Donalsonville, Georgia, April 12, 1929.

It is true that some claim that the laboratory side is somewhat theoretical, but the greater number see in it the practical side.

Under pathological conditions the number of white cells may be diminished or may be increased. Only in three diseases does well marked lymphocytosis occur: (1) Lymphatic Leukemia; (2) Whooping cough; (3) Acute sepsis especially tonsillar.

It is not my intention to try and give the technique of obtaining blood for examination but can only say that the finger tip is very superior to the lobe of the ear. In very young children or especially in infants, the great toe is very convenient to secure the necessary amount for a smear. One may ask how are we to obtain a sufficient amount of blood for a Wassermann or for blood culture when examining for typhoid. The solution is easily solved, as the longitudinal sinus is available and there is no more danger in securing the blood from the sinus than from the median basilic vein in the adult.

We are often consulted because of adenitis in the child. In early life the lymphoid tissue is well developed, especially the tonsils and adenoids. The tissue at times has developed so well that it is difficult to distinguish between the normal and abnormal. Some children, normally have an excessive lymphoid development. The lymph-nodes of the gastro-intestinal tract and the mediastinal glands are the most susceptible to cause producing hyperplasia. Granting that we have a patient with lymphadenitis, what conditions do we have to consider? We find: Acute adenitis, chronic adenitis, syphilis, tuberculosis, mumps, Hodgkin's disease, leukemias, and new growths.

Acute adenitis is often mistaken for mumps and visa versa. In acute adenitis, the cause is infection and here we get a leucocytosis. An increase in the neutrophiles. In mumps we get a leucopenia. An increase in the small lymphocytes. Along with the leucopenia we get the classical sign, the swelling in mumps extends up in front of the lobe of the ear, a condition never seen in lymphadenitis. Chronic adenitis to be distinguished from tuberculosis, syphilis, Hodgkin's disease, leukemias and new growths. In tuberculosis the glands are matted, in syphilis rather discrete, in Hodgkin's disease the glands are very discrete. In tuberculosis (uncomplicated) we have a leucopenia, and, too, the Von Pirquet test can be used. In syphilis we have a leucopenia, increase in the small lymphocytes, and, too, the Wassermann test or Luetin test can be used.

In Hodgkin's disease, as stated, the glands are discrete, usually swelling of only one side of the neck (if seen early), although any part of the lymphatic system may be involved. The blood picture is practically normal. Usually the total white is normal or there may be a slight increase. The most marked change being an eosinophilia. A secondary anemia. New growths are usually distinguished by a more rapid growth, the great size, and can be absolutely positive by a microscopic examination of a portion of the node. Sarcoma is the rule in children as the old adage holds true in the greater number of the cases "Sarcoma in the young and carcinoma in the old."

According to Ghon, who is an authority upon tuberculosis in children, the diagnostic tuberculin reaction is positive. In many cases changes are detected, macroscopically as tuberculosis, which would otherwise be overlooked without the tuberculin reaction. In isolated cases many changes will be overlooked. There can be no doubt as to the specific value of the tuberculin reaction.

The diagnosis of infantile scurvy is usually not difficult, but the fact that the frequency or existence is often overlooked. In an infant between six and eighteen months of age, with tenderness over more than one bone, should make one suspicious of scurvy. Of course when we find reddened, bleeding and swollen gums we are generally sure of the diagnosis, but when this is absent we are not so sure.

One has to consider rheumatic fever, rickets, syphilis, tuberculosis, joint disease, osteomyelitis and sarcoma.

In rheumatic fever we have a leucocytosis and a high temperature. It is also rare under one year of age. Not so in rickets. The x-ray findings in scurvy can be almost called pathogomonic. In scurvy we find as the

very earliest sign, the so-called "white line" at the junction of the epiphysis and diaphysis. In rickets tenderness is a rare symptom, the epiphysis is enlarged, but the x-ray examination will rule it out or confirm it. Syphilis by total white count (a leucopenia), lymphocytosis, Wassermann or Luetin and, too, syphilis usually occurs before the fifth month. Tuberculosis joint disease by leucopenia, pain upon motion and x-ray examination. Osteosarcoma by x-ray examination. Osteomyelitis is usually confined to one limb, very high temperature, leucocytosis, and the x-ray.

Vomiting is a common condition in infants and children. Vomiting associated with headache is one of the classical clinical symptoms of the onset of acute infectious diseases but it may be the warning symptom of many conditions among the most common being meningitis, intestinal obstruction, acid intoxication and acute gastric indigestion. Intestinal obstruction can usually be excluded or confirmed by the character of the vomitus, the physical signs in the abdomen, clean tongue, free movements of the bowels and low temperature. If meningitis along with the clinical symptoms, the blood shows a leucocytosis and can be positively excluded or confirmed by lumbar puncture. Acid intoxication (sometimes called acidosis) by the sweet odor of the breath and the presence of acetone and di-acetic acid in the urine. In any case of prolonged vomiting and after the urine examination we find acetone and di-acetic acid we should not be too hasty in diagnosing the condition acid intoxication, because the abstinence from food for 36 hours will account for finding acetone and di-acetic acid in the urine being due to starvation.

It is a well known fact that the laboratory is essential for diagnosis in many cases, especially those coming under the care of those interested in pediatrics. It is true that some of the cases presented are so pronounced that the laboratory does not have to be consulted but even in these it should be used to check up the final diagnosis.

In the very young, in those who cannot give you a description of the pain, etc., and where the classic clinical symptoms do not predominate, we are at a loss without the laboratory. This is especially true in the obscure temperatures. In the differentiation of the diarrhoeas without the microscope, we are at a loss as to treatment. In anemias how can we differentiate between a secondary and a primary anemia without the microscope? The spleen is enlarged in both, anemia in both, malaise and slight temperature in both. In intestinal parasites who could tell the offending one without microscopic examination, and the differentiation is important because upon the type depends the treatment.

Let us now look upon the blood picture, that is the normal, in infants and children. We all know that the picture is reversed compared to the adult. Compared to the adult the Hemaglobin in young children is between 65 and 85 per cent, 65 per cent being very low. The red blood cells in infancy are from 4,000,000 to 6,500,000 per cm.; in childhood from 4,000,000 to 4,500,000. These figures are taken from Hayem. Rieder's table shows the following as to the white cells:

Birth—14,200 to 27,400.
Second to fourth day—8,700 to 12,400.
After the fourth day—12,400 to 14,800.
Infancy—9,000 to 14,000.
Later childhood—6,000 to 12,000.

Compare this to the adult with normal count of 7,500 to 8,000.

The differential is interesting and is reversed compared to the adult.

	Adults	Children
Lymphocytes	20-35%	50-60%
Polys	70%	20-30%
Eosinophiles	Less than 1%	2 -4%

Called to see a patient with obscure temperature, the only one thing we can find after a thorough physical examination is the temperature. What is the diagnosis? Among the causes of obscure temperature we find leading the list pyelitis, then otitis, typhoid fever, malaria (especially chronic), tuberculosis, after active exercise and empyema. What conditions give us a leucopenia? Among these we find typhoid, tuberculosis, measles, malaria, influenza, and mumps. A total white count alone will give us a good deal

of information. If a leucopenia we can rule out otitis, pyelitis and empyema, because here we have a leucocytosis. If a leucopenia we will have to differentiate between typhoid, malaria, tuberculosis and after active exercise. A differential will aid us. In typhoid malaria, and tuberculosis we have an increase in the small lymphocytes and a corresponding decrease in the polys. When making the differential (and 300 cells should be counted), we can look for the malaria parasite. If none are found we have typhoid fever and tuberculosis to consider. Suspecting one of these the laboratory will aid us again, a Widal and Von Pirquet. We all agree that a negative one of either will not guide us absolutely but will aid us quite a good deal. If a leucocytosis we have to differentiate between pyelitis, otitis, and empyema. If pyelitis the examination of the urine will clinch the diagnosis or rule it out. If the urine is negative, otitis and empyema must be considered. Otitis by the otoscope and empyema by parencentesis of the chest. Another valuable aid in making a differential is that while doing so we can note the condition of the red cells, such as polychromatophilia, pokilocytosis, anisocytosis nucleated reds, all suggesting a secondary anemia.

In any case of prolonged fever without apparent cause the possibility of some blood disease must be borne in mind; as an example, acute lymphatic leukemia. Some cases show no noticeable degree of anemia and beyond malaise and an obscure temperature, nothing may be found until an examination of the blood.

Relative leucocytosis is more frequent in children than in adults.

The most marked degree of leucocytosis is observed in the healthy, robust child suffering from a severe infection and a feeble child may show the reverse, with the same disease. Chiefly the leucocytosis of children is of the inflammatory type.

In pertussis we can diagnose the condition far ahead of the paroxysmal stage. There is always a lymphocytosis, especially in the early stages and an increase in the small lymphocytes and an increased eosinophilia. In pertussis the white count may reach from 15,000 to 30,000 and this increase may be found before the paroxysmal stage. In this count the differential will show a markedly increase in the lymphocytes, running as high as 65 to 70 per cent.

We often see children with asthma. In the differential one can gain much valuable information. In true bronchial asthma the eosinophiles may be from 10 to 20 per cent of the total. Eosinophilia will differentiate the condition from one of acute bronchitis or tuberculosis. Should the asthma be due to acetone, then the examination of the urine will clear the diagnosis. In finding eosinophilia one must be careful to exclude eczema and intestinal parasites.

While not so important as to treatment, in congenital heart disease, polycythemia is the rule. The red cells average from 6,000,000 to 7,000,000 while the white cells remain unchanged. This is an aid when we are trying to differentiate a congenital from an acquired or hemic murmur, taking all clinical signs into consideration.

The blood pressure while not observed so often is an aid. According to Bauchwitz the normal is as follows:

1 to 2 years—75 to 85.
3 to 4 years—85.
5 to 7 years—90 to 95.
8 to 10 years—95 to 100.
11 to 13 years—100 to 110.

In scarlet fever the pressure is important because a low pressure calls for stimulation. It is increased in acute cerebral compression, anemia and acute nephritis.

Suppose that a patient was brought in and during the examination we found an enlarged spleen, barely palpable or very much enlarged. How are we going about to find the cause of the enlargement? Here the laboratory is indispensable. So much satisfaction can be gained by only a few minutes work. Say twenty at the longest. What are the causes of splenic enlargement? Rickets and other debilitating conditions of childhood, with or without anemia, malaria, typhoid, leukemias, Hodgkin's disease, splenic anemia, and syphilis.

We have discussed malaria and typhoid. A total white, red differential and hemoglobin will give us an absolutely correct diagnosis

between the leukemias and Hodgkin's disease, because in the leukemias (whether lymphatic or myelogenous) we have the highest total white count of any disease, running as high at times as 250,000 to 500,000 per cm. The differential tells us whether it is lymphatic or myelogenous. In both conditions, true leukemia and Hodgkin's disease, we have glandular enlargement. In Hodgkin's disease the entire blood picture is, as a rule, normal with the exception of a secondary anemia.

In syphilis the lymphocytes will be increased and a leucopenia and, too, the Wassermann and the Luetin can be used, the Luetin being more dependable.

Every patient coming under our care should have a urinalysis. This should be the rule and there should be no exception. This should hold true from the infant to the age limit. Much valuable information can be gained by ten minutes work. The color, sediment, s/g, reaction, albumen, sugar, indican, acetone, di-acetic acid, bile, pus, blood, hyaline, granular, granular casts, cylindriods, epithelial cells, urates, and phosphates. All should be looked for and record kept. Many cases of papular eruptions diagnosed as scabies, can be traced to a faulty diet and a faulty digestion and in these cases we get a heavy indican reaction. Cyclic vomiting and cyclic albuminuria are easily diagnosed by a few minutes work. Pyelitis we have discussed. Indicanuria is one of the prime causes of nervous children. Clear the indican, and the patient will be rid of the nervousness. The technique is simple: Equal parts of urine and Hcl. Oxidize with copper sulphate, add chloroform and shake. If indican is present the chloroform will become blue. Here we have to differentiate between indican, iodides, and both indican and iodides in the same urine: Indican a blue color, iodides a pink, both indican and iodides a purple. In cyclic vomiting, sometimes called acidosis, acetone is always found, in either small or large amounts, the reaction never indicating the severity of the condition; that is, if a trace or heavy amount. Di-acetic acid is always found when acetone is present because it is the end product of acetone. Acetone is also found in starvation, high temperature and in diabetes, but the clinical signs will go with the chemical examination.

In examining urine of children the urine voided at any time will not do. We should ask for at least three specimens, morning, noon and night. This is important especially when suspecting acidosis and more so cyclic albuminuria. Many times the urine will show acetone in one specimen and not in another, and it is positive that to diagnose cyclic albuminuris it is imperative that we have the three specimens.

At times we are consulted because of blood in the urine or during the routine examination we find blood in microscopic amounts. Among the possibilities we find: Acute nephritis, scarlatina, purpura, scurvy, calculi, malignant growth of the kidney, tuberculosis of the kidney and from the indigestion of certain drugs. In malaria at times the urine is of a deep brown color and contains hemoglobin. Find very few corpuscles.

Pus in the urine is very often found and is usually due to pyelitis, cystitis, pyelocystitis, or pyonephrosis. In pyonephrosis besides pain, etc., the urine is scanty and have intervals of a large amount. Pyelitis at times is confused with malaria, typhoid and acute intestinal infection. Repeated urine examination will clear up the condition if it be pyelitis.

In the adult the stools are usually examined for parasites or for occult blood. In children far more information can be gained. In the adult, a piece the size of the thumb is sufficient. In children the entire stool should be examined. Why? First, the microscopic examination will give a good deal of information, namely: Color, odor, consistency, undigested matter, pus, blood, fermentation, curds, casein beans. The microscopic examination pus, blood, starch, free fat, fatty acid, soaps, ova. In summer diarrhoeas much valuable information can be gained by the use of the scope. One can differentiate between the infectious diarrhoeas and the fermentative. The gas bacillus diarrhoea can be told by the use of the fermentation tube. Pus and blood are found in large amounts in the infectious diarrhoeas. Undigested food, the cause of many abdominal pains, can be seen by microscopic examination. In

examining stools, the color should not be judged from the outside, as it may change very rapidly from exposure to the air. Break it up or smooth it out. Green colored stools may be due to chemical changes or to bacteria. If bacterial, nitric acid will decolorize it. Gray color is due, as a rule, to absence of bile and to fat. Here use Sudan iii or the iodine test for bile. White stools are usually due to undigested fat in the form of soaps. Use Sudan iii. Black stools may be due to changed blood or the action of some drug. Can distinguish by using Guaiac test for blood. Fat constipation and fat diarrhoea can be distinguished by staining the stool with Sudan iii. The fat globules take an intense red stain. At the same time and with the same slide fatty acids and soaps can be demonstrated, by the addition of acetic acid and heat.

Called to see a patient presenting cerebral symptoms, headache, one of the classical symptoms of the onset of acute infectious diseases, examine the patient and we find rigidity, either mild or severe. The next procedure would be to do a spinal puncture. We would make the puncture to effect a diagnosis. A clear fluid, especially under pressure would denote several conditions, among which would be tubercular meningitis. At times this is slightly cloudy, poliomyelitis, hydrocephalus (especially internal), and meningismus. A cloudy fluid epidemic cerebro-spinal meningitis. Many times the prognosis in poliomyelitis can be told by the cell count. A complete examination of the spinal fluid would consist of the following: If clear or cloudy, if under pressure, or normal, cell count, the invading organism, globulin and Wassermann.

The examination of the cerebro-spinal fluid obtained by spinal puncture will give us valuable evidence in the diagnosis of poliomyelitis. The finding of a normal fluid without fibrin formation and a normal cell count would rule out poliomyelitis. However, a fibrin clot and an increase in the lymphocytes would lead us to suspect poliomyelitis or tubercular meningitis. Of course finding the tubercular bacillus in the fluid would give us a positive diagnosis but it is not found in more than 10 per cent of the cases. In tubercular meningitis is the only form of tuberculosis where we find a leucocytosis.

The Schick test in diphtheria is very valuable and can be done in a few minutes and without pain or inconvenience to the patient. It has proven that it is reliable in almost every instance and one can depend upon it. Given an epidemic of diphtheria it would seem our duty to Schick all contacts and if positive govern ourselves accordingly. At times Vincent's Angina simulates diphtheria, but an examination of a direct smear will settle this.

The Von Pirquet test for tuberculosis in children is reliable until six years of age. As in all other tests a positive reaction is of great value but a negative one should not guide us in diagnosis. Tuberculosis is very common among infants and children. At times there is no cough, only the chest signs and a history of loss of weight, lack of appetite, anemia, slight temperature, especially in the afternoon. The D'Espines sign is helpful. It gives us information that enlarged tracheobronchial glands are present, and 95 per cent of enlarged tracheo-bronchial glands are tuberculous. Finding the bacilli is positive proof, but the majority of children swallow the sputum. Should the child be too young to cough it up, one can collect the sputum by passing an applicator to the larynx and collecting the sputum upon cotton.

The Luetin test is, as a rule, positive in determining syphilis in the child. It can be done by any physician, is painless, and there should be no danger in reading the reaction incorrectly. There is only one precaution necessary, and that is to know whether the patient has been taking iodides. One month must elapse before attempting the reaction. Another important point is to secure the Noguchi Leutin. Luetin tests must be noted for at least three days before coming to any conclusion. Some cases are delayed one week before a reaction occurs. Having Luetin at our command, we should not be dependent upon the Wassermann especially in very young children.

When it can be obtained, abdominal tenderness, is the sign of greatest diagnostic significance in children. It is not a common

symptom in infants and very young children, and is not seen in the acute disturbances of digestion or in infectious diarrhoea. In appendicitis, intussusception and lobar pneumonia, it is most seen. To differentiate between appendicitis and early lobar pneumonia is at times difficult, because as to the laboratory we have a leucocytosis in both, at times higher in pneumonia than in appendicitis. Intussusception usually diagnosed by a definite rounded tumor, and the character of the feces. Pneumonia is much more often diagnosed, or mistaken, for appendicitis than vice versa. At times acidosis is mistaken for appendicitis. In those cases where there is fever, vomiting and acetonuria, a total white will differentiate.

In typical cases of scarlet fever, the combination of fever, characteristic angina, efflorescence and a strawberry tongue, makes the diagnosis easy. Granting a patient with a rash, resembling scarlet fever, how are we to make the diagnosis? We have toxic trythema, infectious erythema, rubella, malaria, measles, and the angina of diphtheria to consider. Measles and rubella can be ruled out as well as malaria, and toxic erythema, by a total white count. In measles and rubella we have a leucopenia. In malaria and toxic erythema the total white is normal. Diphtheria by culture from the throat. Vincent's angina at times bears a close resemblance to the lesion of diphtheria. Vincent's angina has a characteristic gangrenous odor and the general constitutional disturbances are less marked, but at times certainly can only be obtained by bacteriological examination. The fusiform bacillus, with the associated spirochete is always found in Vincent's angina. In scarlet fever we find an increase in the white cells, from 14,000 to 20,000; an increase in the eosinophiles on the second or fourth day, as high as 5 to 12 per cent.

At times we are consulted because of a vaginitis. The question that confronts us—is it specific or not. If during the examination of the smear, we are unable to find gonococci, we should be careful in reporting it negative. One must always bear in mind that there is a latent period in gonorrhoeal vaginitis in which there is no discharge and smears taken then may be negative as to gonococci. The method of Von Giesen is very practical and is easily performed. A 1-5000 solution bichloride mercury solution, fill a medicine dropper, insert in the vagina. Repeat several times and centrifuge, collect the sediment and examine.

Tumors of the kidney usually found in children include: Malignant disease as Hypernephroma. Hyodronephrosis, Perinephritis abscess, abscess of the kidney. In Hypernephroma the kidney may fill the abdomen, usually pain, hematuria, anemia and usually a normal white blood count. The urine always shows blood.

Hydronephrosis we find a very large kidney, is intermittent, disappears with a great gush of urine, slight pain and tenderness. Normal blood picture with exception of an anemia. Perinephritic abscess; usually found pointing on the surface between the crest of the ileum and the twelfth rib. High fever, chills, and a very high leucocytosis. The urine, as a rule, shows nothing abnormal. Multiple abscesses of the kidney, a smooth round tumor in the loin, high temperature and leucocytosis, and if the pelvis is involved, pus in large amounts in the urine, otherwise the urine is negative.

PROCEEDINGS OF THE GENERAL MEETINGS OF THE EIGHTEENTH ANNUAL SESSION of the MEDICAL ASSOCIATION of GEORGIA

MACON, MAY 8, 9, 10, 1929

FIRST DAY—MORNING

Wednesday, May 8

The first general meeting was held at the City Auditorium, Macon, and was called to order at 10:15 by the President, Dr. C. K. Sharp, Arlington.

The President invited all Ex-Presidents in the audience to take seats on the platform, and declared the Eightieth Annual Session of the Medical Association of Georgia duly opened.

Invocation:

DR. W. F. QUILLIAN, President of Wesleyan College, Macon:

Almighty God, our Heavenly Father, we are in Thy presence because of our indebtedness to Thee. Thou hast created us in Thine

own image. Thou hast made us like unto Thyself. Thou hast called us to be the sons and daughters of the Lord Almighty. We bless Thee for the men and women who have gone up and down in our country and among all the nations of the world bearing joy and giving beauty for ashes, and healing disease. We praise Thee for Thy long line of scientists who in the laboratory and in the surgical room have sought to understand the human body, and have used every means to enable us in this generation to know how to overcome the ravages of disease and to become strong and healthy in the lives we live. We praise Thee for leaders like Pasteur, Walter Reed, and Crawford W. Long who have written their names high on the scroll, and have come down to us as men who deserve recognition and praise because of what they have done for humanity.

We pray Thee to let Thy blessing rest upon these men of science. Teach them new truths. Enable them to yield the great principles of life to the common people of our day so that we may be safe from those pestilences that endanger mankind. Grant them long lives to defeat them by every means that is being used for that purpose. Bless our hospitals and all our trained nurses, and all those who contribute to the good of humanity. Above all this, let us not forget the Great Physician who went about doing good, who opened the eyes of the blind and unstopped the ears of the deaf, and gave back the glow of health to the cheek, and restored loved ones to those who had counted them lost. Let us remember that He said, "These things shall ye do and even greater things shall ye do, because I go unto my Father."

We thank Thee for the great things that are being done by the men of Georgia and of the world. Help us to wait at the feet of the Great Physician until we know that truth which shall make us free humanity. Bless this great convention, the President and his associates, and all those who shall gather here from day to day. May these be days of profit as well as days of pleasure. Grant that our people may open wide their hearts and their homes, and may their stay in Macon be blessed. Hear us in our morning prayer. Abide with us in all the days to come, and when life has been finished grant unto each one of us that more abundant life through Christ, our Redeemer. Amen.

Address of Welcome: Dr. M. A. Clark, Macon.

Mr. President, fellow members of the Medical Association of Georgia, ladies and gentlemen: Will you excuse me if I feel a little "chesty" this morning? For nearly forty years I have sat in this organization and heard addresses of welcome and wondered if I could make one, and this morning I am chosen to welcome you at this session. If you knew, fellow members of the Medical Association of Georgia, how I love the Association and you, you would realize what a privilege I count this. Our language is a wonderful language, borrowed from the Latin and Greek and some of the modern languages, it gives us great versatility in expressing our ideas, but when we wish to express the feeling of our heart the greatest of all is the old Anglo-Saxon word "love." Our word this morning is from the Anglo-Saxon, Willa (will) Cuman (to come). We will that you come to us, we welcome you to your session in Macon.

The history of the part Macon has played in the Medical Association of Georgia makes it evident that you should meet with us on this anniversary. On May 2, 1835, seventeen men met in Macon and considered the plan of such an organization. Wonderful as it might be, their plan was that county organizations should make up the Association of the State. Their enthusiasm was great, meetings were held and a call was made for June of the same year. For some reason it did not materialize. Four of those seventeen lived to see the organization in 1849. As some of you will recall in 1849 seventy-six men met here and organized this Association.

Augusta furnished the first president, Dr. L. D. Ford; Savannah furnished the first vice-president, Dr. R. D. Arnolds; Forsyth supplied the second vice-president, Dr. R. L. Roddy; Macon furnished the first secretary, Dr. J. M. Green, and the first corresponding secretary, Dr. C. T. Quintral. They met again in Macon two years later, in 1851, showing some progress. For a number of years the records are incomplete and we do not know about the different meetings, but we know they met in 1889 to celebrate their fortieth anniversary. They met again in 1897 in Macon, and in 1899 they celebrated in Macon their fiftieth anniversary.

At the organization in 1849 there were sexenty-six members, in 1899, 416 members. In 1904, in Macon again, the plan of reorganization was begun, and completed the following year in Atlanta. At the 1904 meeting there were 625 members. The reorganization was put into effect in 1905. They met again in Macon in 1909, with about 1,000 members. That was the sixtieth anniversary, and then you met again with us in 1914, with the Association showing a steady growth. In 1920 you met here again, and now you are here to celebrate your

eightieth birthday, with a membership of 1798, showing the progress of the Association.

Now, gentlemen, those seventy-six charter members may not have known much medicine as we understand it, but we are sure that for that day and generation they knew a great deal of medicine, and they must have been big-hearted, wise and far-seeing men because we have evidence of that in our zeal. The clasped hands, the joined right hands, joined to fight against disease, to work unitedly for their fellowmen and posterity, to support each other, forgetting everything else but the good of humanity, and in that way help to manifest to us the teaching and practice of the Great Physician whom we all revere and love to serve. It is not out of order to renew that hand clasp today. May we at this eightieth anniversary join hands and work together more unitedly. Those times may come when the pressure of everyday things may divert us a little from that grand example, but we will come back to that united hand clasp, joined to continue the work of stamping out disease and protecting humanity, and perhaps in our every day work set a little more the example of the Great Physician whom we serve.

So, gentlemen, it is a great pleasure to welcome you. We do not turn the key to the city over for the doors are all open. The Chamber of Commerce, the City, the Churches, all welcome you for your scientific discussions, your recreation, and your pleasure. The druggists tell me they have an unusual amount of *aqua pura* on hand, and some of them are honest enough to say that the *aqua Ocmulgiensis* that will be furnished you at the hotel is just as good. Gentlemen, some of you may be like Senator Sorghum—while living in a prohibition state you are for prohibition, but feel that you should study both sides of the question, and if anyone offers you a mint julep you should partake of it. If that is done in quiet, I assure you nothing will be said.

Much could be said and not much accomplished. I think it was Sophocles who said "Many wise things are bound up in a short speech." I cannot more fittingly welcome you than by repeating the little Irish welcome—gentlemen of the Medical Association of Georgia,

"Come in the evening, come in the morning,
Comewhen expected, or come without warning,
Thousands of welcomes you'll find here before you
And the oftener you come, the more we'll adore you."

Response to Address of Welcome: Dr. G. Y. Moore, Cuthbert.

Mr. President, Dr. Clark, ladies and gentlemen:

It is a happy privilege to be selected to respond to this cordial welcome in our behalf. To meet here in this beautiful city is most significant. All true Georgians are proud of this Empire State of the South, and those who have had the great pleasure of visiting Macon could not fail to appreciate the important place it holds in Georgia, which is in truth a jewel for which the illustrious commonwealth is like a rare setting. Just think of its remarkable assets—there is Wesleyan College, the first institution of higher learning for young women in all the world. Other states have caught the inspiration and erected similar institutions, but Macon was the first to crystalize this dream. To my mind those new buildings at the Greater Wesleyan are beautiful beyond comparison.

Then there is Mercer University holding a most significant place in the history of the progress of Christian education in our State. Numbers, no doubt, of our doctors in attendance upon this convention are its former students. Both of these institutions are supported by one of the finest public school systems of any city and county in all Georgia.

Some of the most attractive church buildings in America, not the best, but most attractive, are found here. Your eleemosynary institutions are noted for the splendid service rendered to the orphans and to the unfortunates of our state. The blind academy, supported by the States, also is located here, and it, too, has done a wonderful work, many of its graduates going into the other institutions for higher learning. Beautiful homes, public buildings, paved streets, splendid water works, lovely parks, and a railroad center with a magnificent union depot are among its assets, and our profession in its public hospitals and privately owned clinics, in which some of the best medical service in the State is being rendered, is among the leading citizens. The most impressive thing to us, who have come together for this gathering, is the fraternal welcome extended to us upon our arrival. We are deeply grateful, and words are inadequate to express our genuine appreciation for all these things. From the heart we give thee thanks.

Report of Chairman of Entertainment Committee: Dr. C. H. Richardson, Jr., I wish to announce that there will be a recital for thirty minutes before each scientific meeting, and we hope you will come early enough to enjoy them.

The Chief of Police has asked me to say that there will be no parking restrictions for any of our members. Park your car as long as you like, any place you like, and if you

find a blue slip in it just hand it to me and you will not hear anything about it.

This afternoon and tomorrow afternoon there will be golf tournaments at the Idle Hour Club. Tomorrow afternoon there will be a trap shooting contest at our Gun Club. You are supposed to bring your own golf clubs and your own gun. The Clinic asked me to extend to you an invitation to visit their hydrotherapy department any afternoon after 2 o'clock, the ladies to go in the mornings. This evening after the public meeting there will be open house at the Doctor's Bldg. and all are cordially invited. On Thursday evening a buffet dinner will be served at the Idle Hour Club, with entertainment afterward, and we hope you will all be present.

Scientific Program

Dr. W. W. Jarrell, Thomasville, read a paper on "Some Homely Truths About the Heart."

Dr. Thomas J. Charlton, Savannah, read a paper on "Quinidine In the Treatment of Heart Disease."

These two papers were discussed together by Drs. H. M. Bowcock, Atlanta; Harold I. Reynolds, Athens; John R. Broderick, Savannah; Julian K. Quattlebaum, Savannah; L. M. Blackford, Atlanta, and in closing by Dr. Charlton.

Secretary Bunce read a telegram of congratulation and good wishes from the Georgia State Association of Physicians, Surgeons, Dentists and Pharmacists (colored).

Dr. James E. Paullin moved that the receipt of the telegram be acknowledged to the President of the Association, with thanks.

Motion seconded and unanimously carried.

Dr. Grady Clay, Atlanta, presented a paper on "Glaucoma Simplex."

Dr. F. Phinizy Calhoun, Atlanta, presented a paper on "Glaucoma From the General Practitioner's View."

These two papers were discussed together by Drs. B. H. Minchew, Waycross; W. H. Cabaniss, Athens; G. H. Lang, Savannah, and in closing by Dr. Clay.

Secretary Bunce made some announcements in regard to registration, alumni dinners and the scientific exhibit, and read a telegram of greeting from the Southern Medical Association.

President Sharp requested Dr. James E. Paullin, Chairman of the Abner Wellborn Calhoun Lectureship Foundation, to introduce the guest speaker, Dr. William S. Baer.

Dr. Paullin: It is with a great deal of pleasure that the Abner Wellborn Calhoun Lectureship Committee is able to bring before you this year a man who can talk to us and bring us a message, which will be of value to all of us in general practice.

This happens to be the second lecturer who has appeared on this program. This Foundation was conceived with the idea that we might present each year at the annual session of this Association some distinguished person who could bring a message which would be of value to all of us. The Foundation was established, and hopes to be a great deal better established, through the generosity of the members of our Association. It is only through the contributions of the members of this organization and the friends of Dr. Calhoun that we hope to raise a sufficient amount of money to permanently endow this lectureship. So far we have not raised a sufficient amount to furnish an annual income which we think would justify bringing these men to our meetings. We hope that those who are here today will contribute of their means to the establishment of this foundation. We hope that every member of this Association will contribute something to the Foundation, for the reason that we are most anxious to have it an active, participating part of the entire membership of the organization. We believe that it fills a needed place in the organization, and we believe that the dividends that each one receives each year by his attendance at these meetings will amply repay him for any investment he may care to make in this Foundation.

In order to assist some of you in making up your minds to contribute, we have prepared and will distribute to you blank checks. All you have to do is to fill in the name of your bank, the amount you wish to give, and sign your name. We have done this so that it will save you the trouble of mailing your checks back to us. We have glasses if you have forgotten yours, and fountain pens are available, so we do not wish any excuses. So far we have only $1,500, but with the encouragement we have received we hope that within a short time we will have a sufficient amount to furnish us a lecturer at all times.

Today I have the honor and the pleasure of presenting for your consideration a man who has been most distinguished in his particular line of work. A man who has contributed very largely to the knowledge of orthopedic surgery, and a man who has contributed greatly to the relief of suffering humanity, not only by his clinical work, but through the tremendous amount of work he did during the World War and the rehabilitation of our soldiers afterward.

It is with a great deal of pleasure that the

Abner Wellborn Calhoun Lectureship Foundation presents to you today Dr. William Stevenson Baer, head of the department of orthopedic surgery in Johns Hopkins University, Baltimore.

Dr. Baer: Mr. Chairman and Gentlemen: It was with a great deal of pleasure that I accepted the invitation to come and talk to you this morning, and a particular pleasure to speak for the Abner Wellborn Calhoun Foundation, founded in honor of a man who, as you all know, did such marvelous work and was so beloved in this community and in this State.

I realize that you have been here two or three hours and you must be weary with the scientific program, good as it is. I also realize that the edible hour is close upon us, and also, as the late President of Yale University once said, that no soul is saved after the first fifteen minutes. Therefore, I will be as brief as possible.

Dr. Baer then addressed the audience on "Arthritis," illustrated by lantern slides and motion pictures.

The meeting adjourned at 1:25 to reconvene at 2:30 P. M.

First Day—Afternoon
Dry Clinics

The Association met and was called to order at 2:30 by the President, Dr. C. K. Sharp, Arlington.

Dr. A. R. Rozar, Macon, and *Dr. T. C. Davison*, Atlanta, gave a clinic on "Gall-Bladder Disease." Discussed by Drs. L. M. Blackford, Atlanta; Frank K. Boland, Atlanta; Arlander A. Barge, Newnan; C. W. Roberts, Atlanta, and in closing by Dr. Rozar and Dr. Davison.

Dr. G. Y. Massenburg, Macon, gave a clinic on "Mycosis Fungoides." Discussed by Drs. A. A. Rayle, Athens; Howard Hailey, Atlanta, and in closing by Dr. Massenburg.

Dr. T. E. Rogers, Macon, and *Dr. V. P. Sydenstricker*, Augusta, gave a clinic on "Pernicious Anemia." Discussed by Dr. E. C. Thrash, Atlanta, and in closing by Dr. Sydenstricker.

Dr. William C. Pumpelly, Macon, and *Dr. Hal M. Davison*, Atlanta, gave a clinic on "Heart Disease."

Dr. J. A. Fountain, Macon, and *Dr. E. C. Thrash*, Atlanta, gave a clinic on "Heart Disease." Discussed by Dr. George L. Echols, Milledgeville, and in closing by Dr. Thrash.

Dr. C. C. Harrold, Macon, and *Dr. Howard Hailey*, Atlanta, gave a clinic on "Scleroderma." Discussed by Drs. M. Hines Roberts, Atlanta; T. C. Davison, Atlanta, and in closing by Dr. Harrold.

Dr. C. H. Richardson, Jr., Macon, and *Dr. A. J. Mooney*, Statesboro, gave a clinic on "Postoperative Pulmonary Atelectasis."

The meeting adjourned at 5:20 p. m. to reconvene at 8:00 p. m.

First Day—Evening

The Association met and was called to order at 8:15, by the President, Dr. C. K. Sharp, Arlington.

Invocation: Dr. M. A. Clark, Macon.

Oh, Lord, our Heavenly Father, Thou who knowest all things and knowest the needs of this occasion, we come this evening and ask that Thou wilt grant what is needed for Thy glory, and that what we do will redound to Thy glory, because we ask it in Thy name. Amen.

Scientific Program

Dr. T. E. Oertel, Augusta, addressed the Association on "Our Poisonous Serpents," illustrated by lantern slides.

Dr. Morris Fishbein, Editor of the Journal of the American Medical Association, Chicago, delivered an address on "Fads and Quackery In Medicine."

Dr. C. W. Roberts, Atlanta, read a paper entitled "The Challenge of Industry to Present-Day Medicine."

Vocal and instrumental music was interspersed throughout the program.

Thursday, May 9, 1929
Second Day—Morning

The Association reconvened on Thursday morning, May 9, 1929, and was called to order at 9:15 by the President, Dr. C. K. Sharp, Arlington.

Dr. George W. Fuller, Atlanta, read a paper on "Spinal Anesthesia—Use of Spinocain in 100 Cases." Discussed by Drs. Grady N. Coker, Canton; C. H. Richardson, Jr., Macon; T. C. Davison, Atlanta; Floyd McRae, Atlanta; Frank K. Boland, Atlanta; Dan Y. Sage, Atlanta; P. L. Holliday, Athens; J. L. Campbell, Atlanta; W. H. Upchurch, Atlanta, and in closing by Dr. Fuller.

Dr. Lee Bivings, Atlanta, read a paper on "Allergic Reactions In Children, With Special Reference to Digestive Disorders." Discussed by Dr. Hal M. Davison, Atlanta, and in closing by Dr. Bivings.

Dr. W. R. Houston, Augusta, read a paper entitled "Learning Therapeutics." Discussed by Drs. George L. Echols, Milledgeville; R. H. Oppenheimer, Atlanta; James E. Paullin, Atlanta; A. A. Barge, Newnan; J. F. Schneider, Atlanta, and in closing by Dr. Houston.

Dr. Jack W. Jones, Atlanta, read a paper on "Nevi."

President Sharp requested the unanimous consent of the Association to defer the discussion on Dr. Jones' paper, and the reading of Dr. Elkin's paper until the afternoon meeting, so that the invited guest for this meeting could present his address.

On motion regularly seconded and carried this consent was given.

Dr. G. Pope Huguley, Atlanta, then introduced Dr. Leora G. Bowers, of Dayton, Ohio.

Dr. Leora G. Bowers, Dayton, Ohio, read a paper entitled "Certain Splenic Syndromes With Indications for Splenectomy."

Dr. Marion T. Benson called the attention of those present to the meeting of the American Medical Association in Portland, and announced the plans that had been made by Secretary Bunce with the American Express Company whereby doctors and their families could make the trip to Portland at very moderate rates. He urged all those contemplating the trip to get into communication with Dr. Bunce or the American Express Company promptly.

President-Elect Dancy then took the Chair, while Dr. Sharp delivered his Presidential Address.

Dr. M. A. Clark moved a rising vote of thanks and appreciation to Dr. Sharp for his faithful services during the past year.

Motion seconded and unanimously carried.

The meeting adjourned at 12:50 to reconvene at 2:30 p. m.

Second Day—Afternoon

The Association reconvened and was called to order at 2:35 p. m. by the First Vice-President, Dr. W. E. McCurry, Hartwell.

Dr. D. C. Elkin, Atlanta, read a paper on "Enlargement of the Cervical Lymph Nodes." Discussed by Drs. W. W. Battey, Augusta; Thomas Bolling Gay, Jr., Atlanta, and in closing by Dr. Elkin.

Dr. Lewis D. Hoppe, Atlanta, read a paper entitled "Clinics for Children of the Pre-School Age In Atlanta." Discussed by Drs. W. L. Funkhouser, Atlanta; Stephen C. Redd, Atlanta; Thomas Bolling Gay, Jr., Atlanta, and in closing by Dr. Hoppe.

Dr. George L. Echols, Milledgeville, read a paper on "Psychiatric Studies Among School Children." Discussed by Drs. H. D. Allen, Jr., Milledgeville; N. M. Owensby, Atlanta; J. F. Schneider, Atlanta, in closing by Dr. Echols.

Dr. Joseph Yampolsky, Atlanta, read a paper entitled "A Report of Six Years Study of the Intraperitoneal Use of Neoarsphenamin and Mercurosal in Congenital Lues." Discussed by Drs. George F. Klugh, Atlanta; Lenton Gerdine, Athens; M. Hines Roberts, Atlanta; Paul Eaton, Augusta; Lewis D. Hoppe, Atlanta; and in closing by Dr. Yampolsky.

Dr. Evert A. Bancker, Jr., Atlanta, read a paper on "The Increasing Importance of Undulant Fever." Discussed by Drs. Paul Eaton, Augusta; Allen H. Bunce, Atlanta; T. F. Sellers, Atlanta; S. T. R. Revell, Louisville; and in closing by Dr. Bancker.

Dr. J. D. Gray, Augusta, read a paper on "Agranulocytosis — Report of Two Cases." Discussed by Drs. Edgar R. Pund, Augusta; James J. Clark, Atlanta, and in closing by Dr. Gray.

Dr. William A. Smith, Atlanta, read a paper on "The Epilepsies." Discussed by Dr. Charles E. Dowman, Atlanta; and in closing by Dr. Smith.

Dr. Robert Drane, Savannah, read a paper entitled "Position of the Radiologist." Discussed by Drs. James J. Clark, Atlanta; Robert C. Pendargrass, Americus, and in closing by Dr. Drane.

Secretary Bunce called attention to the meeting of the secretaries of District and County Societies at the Hotel Dempsey, and announced that immediately following adjournment of the afternoon meeting a motion film, prepared by Professor Anton J. Carlson and Dr. A. B. Luckhardt, of the University of Chicago, would be presented by Mr. Dickinson.

The meeting was declared adjourned at 6:15 p. m., to reconvene at 9:00 a. m. Friday.

Friday, May 10, 1929

Third Day—Morning

The Association met and was called to order at 9:35, by the President, Dr. C. K. Sharp, Arlington.

Dr. Theodore Toepel, Atlanta, read a paper on "The Sesamoid Bones, Important Factors In Deformities of the First Metatarso-Phalangeal Joint." Discussed by Drs. James J. Clark, Atlanta, and in closing by Dr. Toepel.

Dr. J. C. Patterson, Cuthbert, read a paper on "Perforation of Gastric and Duodenal Ulcer."

Dr. Julian K. Quattlebaum, Savannah, read a paper on "Results of Surgical Treatment of Gastric and Duodenal Ulcer."

These two papers were discussed together by Drs. L. W. Grove, Atlanta; William H. Myers, Savannah; C. W. Roberts, Atlanta; Thomas Harrold, Jr., Macon; George L. Echols, Milledgeville; Leora G. Bowers, Dayton, Ohio; A. H. Hilsman, Albany; and in

closing by Dr. Patterson and Dr. Quattlebaum.

Dr. Marion T. Benson, Atlanta, read a paper on "Some Problems In Gynecology." Discussed by Drs. W. L. Cooke, Columbus; C. H. Richardson, Jr., Macon; William H. Myers, Savannah; and George W. Fuller, Atlanta.

At this point President Sharp took the Chair and called for the report from the House of Delegates.

Secretary Bunce stated that the minutes would be printed in full in the Journal with the transactions of the annual session, and gave a brief resume of the action of the House of Delegates. (Cf. minutes of the House of Delegates.)

Dr. W. E. McCurry moved the adoption of the report as given. Motion seconded and unanimously carried.

Dr. Ralph H. Chaney, Augusta, read a paper on "Mesenteric Cysts With Intestinal Obstruction." Discussed by Dr. A. H. Hilsman, Albany, and in closing by Dr. Chaney.

Dr. G. Lombard Kelly, Augusta, read a paper on "A New Mode of Artificial Insemination In the Guinea Pig." Discussed by Dr. Homer R. Blincoe, Atlanta, and in closing by Dr. Kelly.

Dr. Marion C. Pruitt was granted the privilege of the floor and announced the Emory University Alumni Clinic Week, June 3-7, in Atlanta, explained the plans for the meeting and invited all those who were interested to attend.

Dr. C. W. Roberts introduced the following resolution:

Whereas, We have been permitted again to meet in this city so closely connected with the origin and development of organized medicine in Georgia, therefore be it

Resolved, That the thanks of the Medical Association of Georgia be extended to all the good people of Macon, to the various artists who have contributed to our entertainment, to the Macon press, to our beloved hosts of the Bibb County Medical Society and the Womans' Auxiliary for the splendid entertainment and all the courtesies that have been shown us, and for the preparations and facilities for this meeting, that will go down to posterity as one of the most successful in our history. And be it further

Resolved, That this Association express its appreciation to the various exhibitors, and particularly to the members of our Association who have illumined the scientific intervals of our session.

Dr. R. L. Miller moved that this resolution be adopted. Motion seconded and unanimously carried by rising vote.

The President declared a recess of five minutes before proceeding to the election of officers at the hour of 12 noon.

The Association was called to order promptly at 12 by President Sharp, who explained the provisions of the Constitution and By-Laws governing the election, and requested the Ex-Presidents in the audience to act as tellers.

The following officers were then balloted upon and declared duly elected:

President-Elect: Dr. G. Y. Moore, Cuthbert.

First Vice-President: Dr. C. H. Richardson, Jr., Macon.

Second Vice-President: Dr. Grady N. Coker, Canton.

Delegate to A. M. A.: Dr. Allen H. Bunce, Atlanta.

Alternate to A. M. A.: Dr. O. H. Weaver, Macon.

Councilors:

Ninth District: Dr. C. L. Ayers, Toccoa.

Tenth District: Dr. S. J. Lewis, Augusta.

Eleventh District: Dr. A. S. M. Coleman, Douglas.

Twelfth District: Dr. J. Cox Wall, Eastman.

Selection of Meeting Place

An invitation was extended by Dr. W. A. Mulherin, on behalf of the President of the Richmond County Medical Society, to meet in Augusta in 1930. Upon motion of Dr. W. R. Dancy, regularly seconded and carried, this invitation was accepted.

Dr. T. E. Rogers, on behalf of the Colored Medical Association, extended their thanks for the privilege of being permitted to attend the scientific meetings of the Medical Association of Georgia.

President Sharp announced that 557 had registered, this being the largest registration for members outside of the local society, and that 120 or more members of the Womans' Auxiliary had been present.

Installation of Officers

President Sharp appointed Dr. Clark and Dr. Mulherin to conduct President-Elect Dancy to the platform.

Dr. Sharp: Mr. President, in yielding to you the gavel of authority in this Association, I do so wishing for you the cordial and sympathetic consideration that the members of the Medical Association of Georgia have shown me. In the performance of your duties I bid you Godspeed.

Dr. Dancy: Dr. Sharp, Fellow-members of the Medical Association of Georgia, Ladies of the Auxiliary, and Guests: On an occasion like this, when one has been honored with the highest gift which you have

to confer, the presidency of our splendid organization, he is touched by an inexpressible feeling, with a sense of mingled joy, happiness and appreciation, and with a determination to work to accomplish a purpose, as well as a consciousness of inability and unworthiness of an honor undeserved. Yet, with all this confusion of mind, and somewhat of body, the honor you have conferred is most gratefully accepted, with all the work and all the duties that go with it. It will be my earnest effort to give you the best that is in me, not only for the Medical Association of Georgia, but for its associated body, the Womans' Auxiliary. I want this year to be characterized by harmony and cooperation, and in pledging you my best efforts I feel that I am entitled to expect your genuine support throughout the year in all the regular and sensible things which are the purpose of this organization. I have no regularly prepared speech. The position of the president-elect is one which this year had to set precedence. I was told that I would be expected to set some precedents, and I have tried to do so, in order. I am not given to making many speeches. A friend of mine said the other day, "How is it that everyone had regarded you as a little, hen-pecked man who has rarely ever opened his mouth, and yet at this convention you are doing a great deal of "talking." Another nearby friend said he had just returned from Europe and he imagined being the president of the Medical Association of Georgia was a good deal like a long sea voyage—if there is anything in one, good or bad, it generally brings it out.

I wish at this time to announce the committees for the coming year. I do this because I want these committees to get busy on the work of the Association. I do not care to defer these appointments for weeks to come.

Scientific Work

Dr. C. H. Richardson, Chairman, Macon, Georgia.
Dr. C. W. Roberts, Atlanta, Ga.
Dr. A. H. Bunce, Secretary-Treasurer, Atlanta, Ga.

Public Policy and Legislation

Dr. C. E. Waits, Chairman, Atlanta, Ga.
Dr. J. W. Palmer, Ailey, Ga.
Dr. A. R. Rozar, Macon, Ga.
Dr. Paul Eaton, Augusta, Ga.
Dr. V. H. Bassett, Savannah, Ga.
Dr. William R. Dancy, President, Savannah, Ga.
Dr. A. H. Bunce, Secretary-Treasurer, Atlanta, Ga.
Dr. T. F. Abercrombie, Commissioner of Health, State of Georgia, Atlanta, Ga.
Dr. G. Y. Moore, President-Elect, Cuthbert, Ga.

Medical Defense

Dr. M. A. Clark, Chairman, Macon, Ga.
Dr. W. A. Mulherin, Augusta, Ga.
Dr. E. C. Thrash, Atlanta, Ga.
Dr. M. M. Head, Chairman, Council, Zebulon, Ga.
Dr. A. H. Bunce, Secretary-Treasurer, Atlanta, Ga.

Hospitals

Dr. C. S. Lentz, Chairman, Augusta, Ga.
Dr. G. N. Coker, Canton, Ga.
Dr. K. McCollough, Waycross, Ga.
Dr. G. F. Klugh, Atlanta, Ga.
Dr. J. K. Quattlebaum, Savannah, Ga.

Abner Wellborn Calhoun Lectureship

Dr. J. E. Paullin, Chairman, Atlanta, Ga.
Dr. H. I. Reynolds, Athens, Ga.
Dr. E. E. Murphey, Augusta, Ga.
Dr. Craig Barrow, Savannah, Ga.
Dr. F. K. Boland, Atlanta, Ga.

Necrology

Dr. R. L. Miller, Chairman, Waynesboro, Georgia.
Dr. Hines Roberts, Atlanta, Ga.
Dr. J. R. Broderick, Savannah, Ga.

Medical History of Georgia

Dr. E. C. Thrash, Chairman, Atlanta, Ga.
Dr. Frank Boland, Atlanta, Ga.
Dr. M. A. Clark, Macon, Ga.
Dr. William R. Dancy, President, Savannah, Ga.
Dr. A. H. Bunce, Secretary-Treasurer, Atlanta, Ga.

Crawford W. Long Memorial Prize

Dr. William R. Dancy, Chairman, Savannah, Ga.
Dr. Stewart R. Roberts, Atlanta, Ga.
Dr. V. P. Sydenstricker, Augusta, Ga.
Dr. George Bachmann, Atlanta, Ga.
Dr. R. V. Lamar, Augusta, Ga.

Cancer Commission

Dr. J. L. Campbell, Chairman, Atlanta, Ga.
Dr. J. W. Simmons, Brunswick, Ga.
Dr. G. H. Lang, Savannah, Ga.
Dr. Charles Watt, Thomasville, Ga.
Dr. J. C. Patterson, Cuthbert, Ga.
Dr. A. A. Barge, Newnan.
Dr. H. C. Weaver, Macon, Ga.
Dr. R. M. Harbin, Rome, Ga.

Dr. M. B. Allen, Hoschton, Ga.
Dr. Stewart Brown, Royston, Ga.
Dr. W. J. Cranston, Augusta, Ga.
Dr. J. W. Edmondson, Dublin, Ga.
Dr. E. L. Bishop, Atlanta, Ga.

Advisory Committee Woman's Auxiliary

Dr. B. H. Minchew, Chairman, Waycross, Georgia.
Dr. Marion Benson, Atlanta, Ga.
Dr. Paul Holliday, Atlanta, Ga.
Dr. W. H. Myers, Savannah, Ga.
Dr. E. E. Murphey, Augusta, Ga.
Dr. William R. Dancy, President, Savannah, Ga.
Dr. Allen H. Bunce, Secretary-Treasurer, Atlanta, Ga.

Fraternal Delegates to Other State Meetings

To visit Alabama: Dr. R. F. Wheat, Bainbridge; Dr. C. K. Sharp, Arlington, Ga.

To visit Florida: Dr. W. F. Reavis, Waycross, Ga.; Dr. G. Y. Moore, President-Elect, Cuthbert, Ga.

To visit North Carolina: Dr. Hal Davison, Atlanta, Ga.; Dr. C. D. Welchel, Gainesville, Ga.

To visit South Carolina: Dr. C. C. Harrold, Macon, Ga.; Dr. William Shearhouse, Savannah, Ga.

I am sure you will all agree with me that this has been one of the most successful conventions of this Association. I am informed that 732, all told, have been in attendance, which is a wonderful showing. We have been here, we have fraternized, we have come together closer and become wiser in medicine.

I will now ask Dr. C. W. Roberts and Dr. H. M. Davison to escort our President-Elect to the front.

Dr. Moore: I do not know of a greater honor coming to any man than the one you have bestowed upon me. I had rather be President of this Association than to hold any office in the gift of the people. This will always be a memorable occasion, for I feel that I have been rewarded a thousand times for the little I have done. I am proud to be your standard bearer, but can only make a success of my work by having your entire cooperation. I pledge you to do my best to advance our Association and uphold our doctrines. I will continue to put my trust in the Great Jehovah, and ask Him to grant me wisdom and knowledge in order that I may go out and come in before you.

President Dancy requested Dr. Clark and Dr. Sharp to escort Dr. Richardson to the front.

Dr. Richardson: Mr. President, Members of the Association: I appreciate very much the honor you have shown my home town through me. My suspicions were a little bit aroused this morning when a committee approached me and asked my stand on artificial insemination of the guinea pig. My answer to that question seems to have been satisfactory. If you have enjoyed your visit here I wish to take this opportunity to place the credit where it belongs, and that is with the Woman's Auxiliary of the Bibb County Medical Society. I pledge you my best efforts in behalf of our Association.

President Dancy requested Dr. Miller and Dr. Clark to escort Dr. Coker to the front:

Dr. Coker: Mr. President, Members of the Medical Association of Georgia, and the Woman's Auxiliary: Thank you very much for the honor you have conferred upon me. I assure you right now that our President, President-Elect and all the other officers will have my hearty co-operation. I will give the best I have.

Dr. C. W. Roberts moved that the papers of Dr. C. E. Rushin, Atlanta, and Dr. Otis S. Cofer, Atlanta, be read by title and published in the Journal.

Motion seconded and unanimously carried.

President Dancy: If there is nothing further to come before this meeting I hereby declare the Eightieth Annual Session of the Medical Association of Georgia adjourned, *sine die*.

ALLEN H. BUNCE,
Secretary.

USE OF CHLORINE IN WATER PURIFICATION

George C. Bunker, New York (Journal A. M. A., January 5, 1929), is of the opinion that the disinfection of water supplies by the application of liquid chlorine and calcium hypochlorite is established on such a firm basis that it is unnecessary to defend it against the attacks to which it is occasionally subjected in every country. During the last five years noteworthy improvements have been made in chlorinators by the manufacturers with the result that new types have been developed and many of the delicate parts of the first types eliminated. These improvements have lengthened the life of chlorinators and eliminated many of the "troubles" of the operator. The most important unit of the apparatus is the electrolytic cell, and unless the proper cell is selected it is a waste of time and money for a water works or a municipality to adopt electrolytic chlorination. The only other requirement to insure the success of this method is that electric current must be available which is not subject to frequent and lengthy interruptions. This difficulty may be taken care of by the installation of a small generating unit for emergency use; or a chlorinator may be provided for emergency use and a few cylinders of liquid chlorine carried on hand.

THE PARANASAL SINUSES AS FOCI OF INFECTION*

TAYLOR S. BURGESS, M. D.
Atlanta

We are observing more and more frequently the far reaching effects of localized infection: and are continually bringing every available force to bear on the problem of searching out hidden foci of infection. In this scheme of attack on disease, the role of the para-nasal sinus is assuming ever increasing significance.

Anatomy and Pathology

The sinuses may be regarded as evaginating pouches of mucous membrane from the meati of the nose. They are divided into two bilateral groups: the frontal, maxillary and anterior ethmoids emptying into the middle meati; and the posterior ethmoids and sphenoids emptying into the superior meati. Their development begins during intra-uterine life, and continues until the maximum size is reached at about the time of puberty. Formerly, the sinuses were not considered of clinical importance until adult life was reached; but more recent and minute study has shown that they may assume clinical significance in infancy, and from then on are potential foci of infection.

The sinuses are lined with stratified, columnar, ciliated epithelium. The healthy cilia are very active, and, within an hour will carry a foreign body over the entire surface of the sinus, and discharge it at the ostium. With the first onset of infection, the action of the cilia is partially paralyzed, diminishing the ability of the sinus to throw off infective material. As the infection progresses, the mucous membrane becomes edematous there is an infiltration with leucocytes, and considerable pouring out of serous fluid. This secretion increases in amount and soon become purulent. Unless this process is stopped, the mucous membrane becomes permanently swollen and polypoid, the ciliated cells are lost, and true polyps develop. The underlying bone may become involved, areas of osteitis developing. In many cases, the profuse secretion of the acute stage diminishes or ceases altogether. In this event the sinus may be without symptoms, and will escape detection unless a careful examination is made.

Symptomotology

The symptoms of acute sinusitis are clear cut. They are similar to those of an acute head cold except that they are apt to be limited to one side of the nose, the secretion becomes purulent, and there is invariably more severe headache present than that accompanying a coryza. There is also tenderness on pressure over the diseased sinus.

The chronically diseased sinus is the principal offender as it is more difficult to recognize, resistant to treatment, and at the bottom of infinitely more general bodily disorders than is the acutely involved one. The symptoms of chronic sinus infection are variable. Probably the most constant is nasal discharge. This discharge consists of sticky, tenacious, yellow or greenish, sometimes bloody material teeming with organisms. It may either be blown out anteriorly, or pass down posteriorly to be swallowed or expectorated. During sleep undoubtedly much of it finds its way into the tracheo-bronchial tree. Although this symptom is present in most cases, it must be borne in mind that, as previously mentioned, some of the most extensively diseased sinuses are without discharge.

Sinus headaches do not follow any set rules, but certain features have been noted. The pain is not always located over the seat of the lesion. A common site of pain from an acute antrum is just over the eye of the affected side. Most sinus headaches are located in the frontal region, but quite a few occur in the temporal and occipital areas. Any diseased sinus may cause pain anywhere in the head; but, as a rule, frontal pain is from disease in the antrum, frontal sinus, or anterior ethmoids; while occipital or temporal pain is from the sphenoid or posterior ethmoids. Sluder locates the characteristic pain from the sphenoid at a point several centimeters behind the auditory canal. Pain from a sphenoid is occasionally located directly in the eye. The sinus headache is usually of the dull, heavy, throbbing type. It will begin early in the morning—sometimes patients

*Read before the Third District Medical Society, Cordele, Ga. June 22, 1928.

will say that at exactly the same time every morning the pain begins—and tend to wear off during the day. This is probably due to the fact that during sleep secretion collects in the sinus, and during the day is emptied out. Any movement of the head tends to aggravate the pain. A slight head cold producing swelling of the mucous membrance will make it worse. Use of the eyes may increase the severity; but there is not the striking relation that exists when some eye pathology is responsible for the headache.

The tenderness on pressure so characteristic of an acute sinus is not so frequent in a chronic sinus. However, with blockage of the ostium and its attendant headache tenderness on pressure is very apt to develop.

There may be some elevation of temperature in a chronically diseased sinus. This is liable to occur towards the evening. It is frequently associated with slight malaise, lassitude and easy fatigability. This syndrome is particularly prone to occur in persons who are pretty much run down, and always arouses suspicion of tuberculosis. The French writers, Reste2 and Sargent3 noted this condition frequently in groups of soldiers who were unable to be discharged from the army because of suspected tuberculosis. In their cases relief of the sinus condition always brought about a cure.

A chronic cough is frequently due to a coexisting sinus infection. It is apt to be worse in the morning just after arising. In some cases it is due to secretion from the sinus finding its way below the larynx, in others to a dry tracheitis or laryngitis produced by downward extension of the upper respiratory infection.

Malnutrition, especially in children, may depend upon a sinus infection. If a child takes and digests its food well, but refuses to gain weight, and no apparent cause can be found; a careful examination of the nasal sinuses is indicated.

Anorexia, indigestion, and vomiting may occur. The latter is most apt to occur in young children, and is due to swallowing infectious material from the sinuses. L. W. Dean (4) of Iowa City, has noted relief of periodic or cyclic vomiting in babies following sinus therapy.

Change of voice due to lack of resonance in a pus filled sinus sometimes occurs.

The "Modus Opperandi" of diseased sinuses differs from that of other foci of infection in that there are three distinct pathways for its toxin to enter the bodily metabolism. The secretion may be swallowed or aspirated; or there may be direct absorption from the sinus mucosa into the lymph-blood system. Mullin5 and his cohorts have proven the direct absorption of material from a sinus into the neighboring lymphatics from which it enters the general blood stream. Bacteria may also enter the blood stream in this way, and produce a true bacteraemia of sinus origin. This, however, is unusual, most of the bacteria being removed by the interposed lymph nodes. When it does occur it is usually in a very acute, fulminating infection with considerable involvement of contiguous bone.

Systemic Disorders

The part played by sinus infection in general bodily disorders has received intensive study during recent years. Cases of every kind depending upon foci of infection have been found to be associated with sinus involvement. The results of sinus therapy in some have been striking. Diseases of the respiratory tract, of the joints, of the skin, cardiopathies, gastric and duodenal ulcers, colitis, gastritis, infections of the orbital contents, brain abscesses, some types of psychic disorders, and others in association with sinus disease are to be found in discussions in the literature.

There is certainly an intimate relation between infections of the upper and lower respiratory tract. Everyone is familiar with the frequency with which "a cold begins in the head and settles in the chest." Many cases of chronic recurring bronchitis depend upon an underlying sinus infection, and will clear up following relief of the sinus condition. The same relationship is seen in bronchiectasis. Clerf (6), of Chevalier Jackson's bronchoscopic clinic has recently called attention to this relationship. Lung abscess of obscure etiology is frequently as-

sociated with sinus pathology. As mentioned above, the tubercular syndrome may be found to depend upon an infected sinus. During my interneship I examined the sinuses of a large number of non-tubercular pulmonary cases; and the incidence of sinus infection was very high. This was particularly true in chronic purulent bronchitis, and bronchiectasis, where almost every case had some involvement of the sinuses. Relief of the sinus infection was almost invariably followed by striking response in the pulmonary condition. In cases where cure was not to be hoped for the improvement in the general health and well-being was often remarkable. An interesting point here is that in many cases prior to examination there was no suspicion of sinus disease.

Sinus infection in association with heart disease has been noted. Most of the cases reported have been valvular lesions in children and young adults.

The frequency of sinus disease in bronchial asthma is well recognized. The exact relation of the sinuses to the underlying condition has not been definitely determined; but it is a well established clinical fact that where asthma and sinus infection co-exist, eradication of the sinus disease is almost always followed by relief or at least great improvement in the asthmatic condition.

Chronic infectious arthritis is not infrequently found to depend upon a sinus infection, and will clear up with eradication of the sinus disease. In these cases it is noted that with improvement in the sinus condition there is improvement in the arthritis, but with recurrence of the infection in the sinus the arthritis is apt to return.

I have simply touched on a few of the systemic diseases where study seems to have fairly well established a relation with a focus of infection within the nasal sinuses.

Diagnosis

The diagnosis of sinus disease depends upon a careful examination of the nose and consideration of the findings along with the clinical history. One examination is not enough to establish a negative diagnosis as a nose that at one time may be clean at the next may contain pus. If no pus is seen, a suction apparatus producing negative pressure within the nasal chamber will frequently be followed by the appearance of pus in one of the meati. The finding of pus is not necessary to make a diagnosis. As mentioned above there may be no discharge from a badly diseased sinus. In these cases with a post-nasal mirror or a nasopharyngoscope the mucous membrane over the posterior ends of the middle turbinates and septum can be seen to have become thickened, irregular, and polypoid, with dilatation of the blood vessels. Polyps may protrude from the ostium of a sinus and be visible in the nose. Transillumination is a great help in the maxillary and frontal sinuses. The X-ray, while not infallible, is of invaluable aid in diagnosis. If a sinus is suspected of containing pus and its ostium is accessable its contents may be aspirated or washed out and evidence of infection be thus obtained. In the maxillary sinus a needle may be introduced into the sinus under the inferior turbinate and the sinus contents obtained in this manner. In the other sinuses a similar procedure is not safe. The difficulties of diagnosis are quite variable. In some cases the origin of the trouble is obvious; while in others only by persistance and patience is it possible to arrive at a wise conclusion as to the proper method of procedure.

Treatment

The treatment of paranasal sinus disease is a subject within itself, and I will be able to simply mention a few of the salient points. Acute sinusitis will respond to conservative treatment: rest in bed, catharsis, fluids, analgesics, and the use of vasoconstricting substance to promote better drainage along with some antiseptic solution within the nose. As a vasoconstrictor we may use adrenalin, but the effect is short lived, and there is considerable after effect. For this purpose the newer drug, ephidrine, is better suited because of the longer duration of its action and lack of after effect. Either of these drugs should be followed by one of the colloidal silvers or other antiseptic of choice. These drugs are best applied directly, but may be used as sprays or nasal

(Continued on Page 284)

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

JUNE, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

MACON MEETING AND FUTURE DEVELOPMENT

The Eightieth Annual Convention of the Medical Association of Georgia, held in Macon during the month of May, is now a matter of history. It had its distinctive features. The attendance was the largest in its history; the scientific program was splendid; a number of distinguished guests honored it with their presence; the governing bodies enthused at the Association's potentialities adopted a progressive and comprehensive program for the approaching year.

The attendance was doubtless the results of appreciation of organized medicine, of the splendid scientific program and of the realization of the great benefits derived from coming in personal contact with one's fellowmen in medicine. There is no doubt but that he who did not attend the Macon Convention was the loser thereby. It is equally as certain that he who did attend, returned home a broader and better medical man. It is quite remarkable, when one thinks of it, that the registered attendance this year represented forty per cent of the membership of the entire Association. With Augusta as our Mecca next year a 50 per cent attendance is anticipated.

The Association sees a very active year before it. Progress and attainment shall be the watch word. Our efforts must be to complete the very ambitious program as planned. No time should be lost in rendering full support by the entire membership to its every measure. Success must be the result.

To obtain this an earnest appeal is made to each active member of the Association to live up to the name—to become active—to help the organization which is his organization, in its great work.

Its plan of work for the coming year is comprehensive and is worthy of study by the membership. Its legislative program is extensive, including the Basic Science law; the law to establish confidential relationship between patient and physician; and the support of the Department of Public Health, State of Georgia, in its efforts to obtain through the State Legislature funds for its essential work. It is planning in each county or groups of counties in the state adequate hospital facilities. In conjunction with the State Board of Health it is advocating various health measures for the benefit of the people of the state. Medical Defense is carried by the Association, protecting its membership and paying expenses in case of suit. It is lending support to the splendid efforts of the Woman's Auxiliary to raise an educational fund for the medical education of Georgia boys. It offers very rare opportunities to its membership through the Crawford W. Long prize contest and through the Abner Welber Calhoun Lectureship.

There are many other worthy objectives in the work of the Association but these suffice to illustrate its far reaching endeavors and its value to you.

WILLIAM R. DANCY, M.D.

AMERICAN PSYCHIATRIC ASSOCIATION MEETING

The American Psychiatric Association, the American Association for the Study of Epilepsy, the American Association for the Study of the Feeble Minded, the American Psychoanalytic Association and the American Psychopathological Association, held their annual convention in Atlanta during the week of May 13th. The American Psychiatric Association is one of the oldest Medical Societies in America, having been organized in the year 1844. It has held an annual convention each year, except, the year 1862. Because of disturbed conditions existing at that time the convention was not held. Since its origin only two meetings have been held south of Richmond. In 1873 a convention was held in Nashville and some twenty-five years ago New Orleans was the host. This, the first meeting to be held in the Southeast, was secured through the efforts of Dr. N. M. Owensby, of Atlanta, who was the only Fellow of the Association in that city. The attendance of the meeting was between five and six hundred of the outstanding men in their specialties. Among those presenting papers were Drs. W. A. White, of Washington; Dr. Adolph Meyer, of Baltimore; Drs. Orton, Osanato; Kirby and Pratt, of New York City; Dr. Barrett, of the University of Michigan; Dr. Dayton, of Harvard; Dr. Ruggles, of Yale; Dr. Cline, of Boston; Dr. Farrar, of Canada, and numerous equally as prominent men. It may truly be stated that leading specialists from Maine to California and from Canada to the Gulf and all states between were present. The Fulton County Medical Society had Dr. Potter, of New York City, address them on Feeble-Mindedness; Dr. G. Kirby Collier, of Rochester, N. Y., on Epilepsy, and Dr. Ruggles, of Yale, on Psychiatry, at its regular meeting on May 16th. Many unusual distinctions were conferred on Dr. Owensby, of Atlanta, because of his work in Neuro-Psychiatry.

The next meeting will be held beginning May 5, 1930, in Washington, D. C., cojointly with the international meeting of the Mental Hygiene Societies of the entire civilized world.

EMORY CLINICS

The Annual Clinic Week of the Alumni Association of the School of Medicine, Emory University, was held June 3rd to the 7th, 1929. Registration was at the old College Building, corner of Butler and Armstrong Streets.

The first day of the clinics was given over to Class Reunions and Alumni Luncheon on the Campus. Clinics in the P. M. Wesley Memorial Hospital. The rest of the week was held at Grady Hospital on Butler Street. The clinics were divided into operative, ward walks and dry clinics. The wards walks and operative began at 8. a. m. each day. The dry clinics began at 8:30 a. m. and continued until 4 p. m. thirty minutes being given to each speaker on the program. There were no absence of speakers on the program during the entire week. The attendance at the Clinic Week was exceedingly good and there were two hundred and fifty-eight registrations during the week.

On Thursday evening at 8 p. m. there was a special program at the Academy of Medicine through the courtesy of the Fulton County Medical Society, giving over its regular meeting to the Alumni Association. Preceding this meeting there was a buffet supper from 7 to 8 served by a committee of the Ladies' Auxiliary of the Fulton County Medical Society.

At the close of the Clinic Week the annual banquet was held at the Biltmore Hotel June 7th, 7 p. m. The Alumni address was given by Doctor O. H. Bethea, professor of Therapeutics, Tulane University. The following officers were elected:

Dr. Hugh McCollough, Sr., West Point, Ga., president; Dr. F. W. Schnauss, Cecil, Ga., first vice-president; Dr. W. C. Page, Cocoa, Fla., second vice-president; Dr. M. C. Pruitt, Atlanta, Ga., secretary and treasurer; trustees for three years: Dr. T. C. Davison, Dr. J. P. Bowdoin, Dr. C. W. Strickler; trustees for two years: Dr. E. M. McDonald, Dr. F. M. Sullivan, Dr. Floyd Rogers; trustees for one year: Dr. M. T. Benson, Dr. W. A. Miller, Dr. J. F. Posey.

M. C. PRUITT, Sec'y and Treas.

District and County Societies

DISTRICT OFFICERS

FIRST DISTRICT

President ..... Myers, William H., Savannah
1st Vice-Pres. ..... Elarbee, Geo. W., Daisy
2nd Vice-Pres. ..... Ezell, Howard E., Oliver
Sec'y-Treas. ..... Long, Wm. V., Savannah

SECOND DISTRICT

President ..... Chason, Thomas, Donalsonville
Vice-Pres. ..... Sanchez, S. E., Barwick
Sec'y-Treas. ..... Watt, Chas. H., Thomasville

THIRD DISTRICT

President ..... Lunsford, G. G., Cordele
Vice-Pres. ..... Ware, R. M., Fitzgerald
Sec'y-Treas. ..... Greer, Chas. A., Oglethorpe

FOURTH DISTRICT

President ..... Clark, W. H., LaGrange
Sec'y-Treas. ..... Callaway, Enoch, LaGrange

FIFTH DISTRICT

President ..... Fort, A. G., Atlanta
Vice-Pres. ..... Camp, R. T., Fairburn
Sec'y-Treas. ..... Evans, J. R., Decatur

SIXTH DISTRICT

President ..... Miller, G. T., Macon
Vice-Pres. ..... Hunt, K. S., Griffin
Sec'y-Treas. ..... Thompson, O. R., Macon

SEVENTH DISTRICT

President ..... Wood, Chas. V., Cedartown
Vice-Pres. ..... Alsobrook, J. S., Rossville
Sec'y-Treas ..... Perkinson, W. H., Marietta

EIGHTH DISTRICT

President ..... Carter, D. M., Madison
Vice-Pres. ..... Gholston, W. D., Danielsville
Sec'y-Treas. ..... Gerdine, Linton, Athens

NINTH DISTRICT

President ..... Ross, S. T., Winder
Vice-Pres. ..... Welchel, C. D., Gainesville
Sec'y-Treas ..... Bennett, J. C., Jefferson

TENTH DISTRICT

President ..... Cranston, W. J., Augusta
Vice-Pres. ..... McGahee, R. C., Warrenton
Sec'y-Treas. ..... Phinizy, Irvine, Augusta

ELEVENTH DISTRICT

President ..... McMichael, J. R., Quitman
Vice-Pres. ..... Fleming, Albert, Folkston
Sec'y-Treas. ..... Reavis, W. F., Waycross

TWELFTH DISTRICT

President ..... Edmondson, J. W., Dublin
First Vice-Pres. ..... Coleman, W. A., Eastman
Second Vice-Pres. ..... Moye, C. G., Brewton
Sec'y-Treas. ..... Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.
2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richmond, November 12, 1928.
3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.
4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.
5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.
6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.
7. Jasper County, Dr. E. M. Lancaster, Shady Dale, January 19, 1929.
8. Ben Hill County, Dr. L. S. Osborne, Fitzgerald, January 21, 1929.
9. Taylor County, Dr. J. C. Hind, Reynolds, January 29, 1929.
10. Monroe County, Dr. J. O. Elrod, Forsyth, February 6, 1929.
11. Barrow County, Dr. W. L. Matthews, Winder, February 7, 1929.
12. Dooly County, Dr. F. E. Williams, Vienna, March 8, 1929.
13. Macon County, Dr. C. P. Savage, Montezuma, March 8, 1929.
14. Crisp County, Dr. J. N. Dorminy, Cordele, March 19, 1929.
15. Stephens County, Dr. C. L. Ayers, Toccoa, March 26, 1929.
16. Emanuel County, Dr. R. C. Franklin, Swainsboro, March 26, 1929.
17. Cobb County, Dr. L. L. Welch, Marietta, March 26, 1929.
18. Terrell County, Dr. Logan Thomas, Dawson, April 22, 1929.
19. Henry County, Dr. H. C. Ellis, McDonough, May 8, 1929.
20. Sumter County, Dr. Sylvester Cain, Jr., Americus, May 8, 1929.
21. Upson County, Dr. R. L. Carter, Thomaston, May 14, 1929.

DISTRICT HONOR ROLL

Third District, Dr. G. Y. Moore, Cuthbert, June 1, 1929.

NEW MEMBERS FOR 1929

Andrew, James, Macon.
Bickerstaff, H. J., Columbus.
Carpenter, George L., Wrens.
Darden, Horace, Sparta.
Harris, E. C., Rochelle.
Lowe, J. E., LaGrange.
Rollins, W. J., Macon.
Smith, Lewis, Lakeland.
Smith, M. E., Banning.
Wheeler, Lee W., Kite.

DISTRICT MEETINGS

Dates and Places

First District, Thursday, July 18th, Hotel DeSoto, Savannah.

Second District, October 11th, Thomasville.

Third District, Wednesday, June 19th, Ashburn.

Sixth District, Wednesday, June 26th, Indian Springs.

Eighth District, Wednesday, August 14th, Athens.

Ninth District, Wednesday, September 18, Winder.

Tenth District, during August, Augusta.

Twelfth District, Thursday, June 13th, Dublin.

COMMUNICATIONS

PAYING DUES

To the Editor:

Here comes check to cover my dues for ensuing year to the Medical Association of Georgia.

Hope you had a fine meeting at Macon.

If all the doctors were as wide awake and enthusiastic as yourself and Dr. McCord, things would come to pass medically in our State. Best wishes and kindest personal regards.

WM. H. MALONE, M.D.

Tallapoosa, Georgia,
May 22, 1929.

FREE SCHOLARSHIPS SOUTHERN PEDIATRIC SEMINAR

To the Editor:

The Southern Pediatric Seminar, which is a postgraduate course of two weeks held at Saluda, N. C., each summer, is fortunate enough to have seven scholarships to give to men in your state. This scholarship carries with it tuition and board for the two weeks. We are anxious to get these scholarships filled as soon as possible and would appreciate any publicity you could give it to the doctors in your state. We prefer doctors who live in small towns to take these scholarships.

Encolsed you will find a copy of our program for this year.

D. LESESNE SMITH, M.D.

Spartanburg, S. C. *Registrar*
May 8, 1929.

BASIC SCIENCE BILL

To the Editor

In connection with your efforts to procure the enactment of a basic science law, the following statement from the Journal of the American *Osteopathic* Association may be of interest and of value.

"The basic science bill is the most difficult legislation that has ever confronted our profession, for it appeals to disinterested minds and seems absolutely fair to all concerned. No telling arguments in opposition have as yet been produced.

"The danger hidden in this form of legislation is the administrative feature, for if the personnel of the board is inclined to become unfair, it is an easy matter to inflict hardships on the applicants for license.

"If the basic science bill cannot be defeated in the states, every effort should be made to secure representation on the Board of the Basic Science Examiners in all states where such legislation is proposed." Journal of the American Osteopathic Association, 28: 699 (May), 1929.

The statement set forth above appears under the heading "National Affairs—C. B. Atzen, Chairman," following an item announcing that a basic science bill is to be introduced in the Florida legislature. Obviously, it expresses the opinion of a responsible osteopath regarding basic science legislation generally. It admits that "no telling arguments in opposition have as yet been produced."

Of course, the proposed effort to procure osteopathic representation on boards of basic science examiners amounts to an effort to break down the principle underlying all basic science acts, namely, their absolutely non-partisan character. There is no more reason for osteopathic representation, than there is for non-sectarian medical representation, chiropractic representation, naturopathic representation, etc.

WM. C. WOODWARD, M.D.
Director, Bureau of Legal Medicine and Legislation,, A. M. A.

Chicago, Illinois,
May 3, 1929.

COUNCIL ACCEPTED

To the Editor:

In addition to the articles enumerated in our letter of April 26th, the following have been accepted:

Ciba Co., Inc.
- Isarol-Ciba

Deshell Laboratories
- Petrolager with Milk of Magnesia

G. D. Searle & Co.
- Sulpharsphenamine-Searle, 0.1 Gm. Ampules
- Sulpharsphenamine-Searle, 0-2 Gm. Ampules
- Sulpharsphenamine-Searle, 0.3 Gm. Ampules

Swan-Myers Co.
- Canada Blue Grass Concentrated Extract-Swan-Myers.

W. A. PUCKNER, *Secretary*,
Council on Pharmacy and Chemistry, A.M.A.

Chicago, Ill.,
May 25, 1929.

BOOK REVIEWS AND ABSTRACTS

Mark S. Dougherty, M. D.
Department Editor

BOOK REVIEWS

"Proctology," a treatise on the Malformations, Injuries and Diseases of the Rectum, Anus and Pelvic Colon. By Frank C. Yeomans, A.B., M.D., F.A.C.S., Professor of Proctology, New York Polyclinic Medical School; Fellow and Past President, American Proctologic Society; Attending Surgeon, New York Polyclinic Hospital, and New York City Cancer Institute; Proctologist, the New York Hospital.

With 417 illustrations and 4 colored plates. D. Appleton and Company, New York and London. 1929.

Proctology is far from being a new subject. However, recent years have quickened an interest in this wide field and deeper study has been noted in the medical profession.

This volume is arranged in a practical and systematic manner following the recognized form of discussion — etiology, pathology, symptoms, diagnosis, complications, prognosis and treatment.

The subject matter has been handled in a highly creditable way. The author has covered the subject thoroughly. The physical appearance of the book is excellent.

In the chapter on pruritus, he has added another form of treatment. The illustrations are clear and could hardly have been improved upon. This together with the orderly arranged subject matter and index, makes this book a valuable addition to the library of any Proctologist, Surgeon or General Practitioner.

MARION C. PRUITT, M.D.

Practical Clinical Laboratory Diagnosis, by Charles C. Bass, M.D., Dean and Professor of Experimental Medicine, the School of Medicine, Tulane University of Louisiana, and Foster M. Johns, M. D., Assistant Professor of Medicine and Director of the Laboratories of Clinical Medicine, the School of Medicine, Tulane University of Louisiana; illustrated with 134 black and white textual figures and 20 plates, 9 of which are in colors; third edition, completely revised; published by the Williams and Wilkins Company of Baltimore.

The third edition of this popular laboratory book follows the general outline of the two previous editions. It fulfills the aim of the authors to give what they consider the best method of doing each of the more common laboratory tests. No effort is made to describe tests that require special technical skill or equipment. It is well illustrated with original drawings and photographs. While it is an ideal book for the student and practitioner, there are many short cuts and much sound advice that make it valuable to the experienced laboratory worker. The chapters on intestinal parasites and malaria deserves special menion. The illustrations from actual specimens of malarial parasites as seen in properly stained slides are worth the price of the book. The various stages of sexual and asexual forms of each of the three species of malaria are shown in color. Anyone attempting to diagnose malaria by microscopic study should have this book in order to be able to recognize malaria in its various forms and stages.

GEORGE F. KLUGH, M.D.

Pediatrics for the General Practitioner. By Harry Monroe McClanahan, A.M., M.D. J. B. Lippincott Co., Philadelphia, 230 illustrations, 606 pages.

This book deals with almost all of the subjects met with in treating children. The chapter on the normal infant should be read by every physician. The subject matter is taken up under the usual headings. The sentences are short and to the point. There is very little technical discussion on any subjects, most of the reading being highly practical. Most of the 320 illustrations are photographs and are the clearest I have ever seen. In discussing subjects of interest of importance the author often illustrates his point with a short case history. At the end of each chapter there is a complete bibliography. The work is not highly scientific but just what it says it is—"Pediatrics for the General Practitioner."

L. D. HOPPE, M.D.

Chemistry in Medicine. A Co-operative Treatise Intended to Give Examples of Progress Made in Medicine with the Aid of Chemistry, Edited by Julius Stieglitz, Professor of Chemistry, University of Chicago. 757 Pages. The Chemical Foundation, Inc., 85 Beaver St., New York City.

Patricia, the little daughter of Mr. and Mrs. Francis P. Garvan, both of whom are themselves chemists of note as well as very sane philanthropists, died of acute rheumatic fever a few years ago. Her parents have sponsored this book as a memorial to her. In the opinion of this reviewer, it is not *aere perennius*, it may well inspire results more lasting than bronze.

The book is "intended to present to the public as well as to the practitioners of medicine the great possibilities for advancement in medical science through the further co-operation between chemistry and medicine." And the editors have extended the field of chemistry to include those of biochemistry, physiology, bacteriology, immunology and pharmacology. These fields have been less well tilled than that of, say, micropathology, and certainly offer great opportunities.

Although "the gaps in our knowledge" are emphasized, and probably nothing new is presented, it is hard to believe that any physician, however familiar he may be with the material in chapters on subjects in which he is already well versed, can read this little volume without learning a great deal along other lines. At the same time, while he may be thoroughly conversant with the uses of insulin, he can not but be interested in a review of the events leading up to its discovery and the continuation of the study to purify, synthesize and, perhaps, cheapen it. He must be more than interested to read that two of the original pancreatectomized dogs are still living and are pets in the Toronto laboratory. They have developed such conditioned reflexes that they "leap and bark with joy and they salivate profusely whenever the attendant appears with the hypodermic syringe." Would the anti-vivisectionists forbid these diurnal injections of insulin?

The uses of salvarsan are also well known and most of us remember that 605 unsuccessful attempts were made before the achievement of "606." And yet the plain unvarnished tale of Ehrlich's persistence still carries with it a thrill. Further work in the arsenical group is being continued in efforts to make the perfect antiluetic drug, and to find a cure for emoebiasis and African sleeping sickness. Hardly less inspiring is the story of thyroxin and epinephrin with their syntheses. Much water has flowed under the bridge since that day a hundred years ago when, if tradition is true, a biochemist was fired from his professorship for making urea artificially.

Major presents guardedly his hypothesis that essential hypertension is due to guanidin or a guanidin-like substance. If the cause of essential hypertension be discovered—and may God speed the day—it is entirely reasonable to hope that some genius will speedily find a remedy. Some recent work with a liver extract lends support to the hope that we are at least getting warm. Indeed, Dr. Abner W. Calhoun is even now carrying on a painstaking clinical investigation of this liver extract in the treatment of hypertension in the Gray Clinic of the Grady Hospital.

The individual chapters can not be taken up. Suffice it that each is contributed by a master who brings his subject up to date. Unfortunately these masters differ one from another in felicity of expression. The reviewer was surprised to see that Marine ignored Plummer in the section on iodine in the treatment of goiter, and this constitutes his only adverse criticism.

If some university president or medical school dean places this book in the hands of a wealthy and decrepit friend and tactfully points out to him the great possibilities for good from endowing chemical research and laboratories, he will have found the ideal use for this book. Although due credit is given Crawford W. Long and others for what they accomplished with meager means while engaged in general practice, the authors feel that the greatest hope for future advancement lies in organized effort in laboratories with unlimited resources.

De Kruif's "Microbe-Hunters" was deliberately designed to appeal to the popular taste. This is a greater book, is indeed a wow, but it will prove caviar to the general. If during your summer vacation it is too hot for golf, and a nice hammock in a shady spot invites you to kill a few hours in precious, lazy relaxation, do not be deceived by the small size and attractive format of this compendium.

L. MINOR BLACKFORD, M.D.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1928

Cloth. Price, postpaid, $1.00. Pp. 75. Chicago: American Medical Association, 1929.

This book is a great deal more than a mere record of the negative actions of the Council on Pharmacy and Chemistry. It gives in full the reasons for the Council's rejection of various preparations, but it also records results of the Council's investigations of new medicinal agents not yet out of the experimental stage, and frequently contains reports on general questions concerned with the advance of rational drug therapy. All three categories of reports are represented in the present volume.

Among the reports on products that have been denied admission to New and Nonofficial Remedies are those on Sanarthrit and Telatuten, two preparations of animal tissue, of indefinite composition, proposed for use in arthritis and arteriosclerosis respectively; on Clauden, a combination of lipoids and undefined proteins, proposed for use as a hemostatic; on Hart's Alimentary Elixir of Beef, a liquid medicinal food, "fortified" with glycero-phosphates; on Alucol, claimed to be colloidal aluminum hydroxide and marketed under this nondescriptive name; on Oxo-Ate and Oxo-Ate B, claimed to be the ammonium and calcium salts, respectively, of orthoiodoxybenzoic acid and marketed under these proprietary, nondescriptive names; on Terpezone, stated to be pinene ozonide and marketed with exaggerated and unwarranted claims; on Vitalipon, an unscientific and indefinite mixture of lipoids claimed to be extracted from "vegetable and animal embryonic organs;" on Kalak Water, a solution containing sodium bicarbonate with many other ingredients of questionable utility, marketed under a nondescriptive name with unwarranted therapeutic claims; on Eu-Med, Aerosan Tablets, and Thyangol Pastilles, three shot-gun mixtures from Germany.

Among the preliminary reports are those on Metrazol, which has now been admitted to New and Nonofficial Remedies; on Phenylaminoethanol sulphate, a newly swnthesize ephedrine substitute; on Ovarialhormon Folliculin Menformon, the ovarian preparation originated by Dr. Laqueur of Amsterdam; and on Heparmone, a liver preparation.

The special report dealing with dextrose solutions containing cresol and intended for intravenous administration is a note-worthy example of the third category of Council reports we have mentioned.

New and Nonofficial Remedies, 1929, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan 1, 1929. Cloth. Price, postpaid, $1.50. Pp. 488; xlviii. Chicago: American Medical Association.

This book offers a solution to the problem of the busy physician who is daily importuned by "detail" men to try the thousand and one new preparations brought out by enterprising manufacturers of pharmaceuticals. If the preparation in question is not described in New and Nonofficial Remedies, it is quite safe to refuse to try it no matter how alluring the salesman's talk. The book contains descriptions of those new preparations which, after painstaking examination, the Council on Pharmacy and Chemistry has found worthy of recognition and of trial by the medical profession. It is revised each year to bring it up to date with the best medical thought and to include the new preparations that have been recognized during the year as well as to delete those which have been found not to live up to their promise of therapeutic value.

In this edition there appears for the first time an article on liver preparations and their therapeutic use. The articles on ergot, metallic peroxides, pituitary gland, and radium and radium salts have been considerably revised. Among the new preparations which have been included in this edition are: diphtheria toxoid, which is the toxin of diphtheria so modified by treatment with formaldehyde as greatly to reduce its toxicity yet preserving its antitoxic power; metrazol, another proposed substitute for camphor; liver extract No. 343 and concentrated lixer extract-Armour, for the treatment of pernicious anemia. Other newly accepted articles are: bismuth sodium tartrate-Searle, another water soluble bismuth tartrate preparation; scarlet fever toxin-P. D. & Co., another scarlet fever toxin manufactured under lease of the Scarlet Fever Commission; parathyroid hormone-Squibb, standardized by the method of J. P. Collip, and paroidin, made and standardized by the method of A. M. Hanson, both being solutions of the active principle or principles of parathyroid gland for appropriate clinical use. An important deletion is the omission of all generators charged with radium.

A new departure in this edition is a list of "exempted" articles. This comprises some hundred and thirty medicinal and non medicinal products examined by the Council and found to be of such composition and to be so marketed as not to require acceptance or rejection by the Council under its rules.

A section of the book (brought up to date each year) gives references to proprietary articles not included in New and Non-official Remedies. This list, in conjunction with the book proper constitutes a cumulative index of proprietary medicines, brought to their attention. Physicians cannot dispense with the use of the newer remedies that are brought out each year; yet they can neither judge them on the basis of the manufacturers' claims nor have they the time or means to determine their merits for themselves. For this reason, every physician should possess a copy of this volume, which annually puts at his disposal an authoritative, up to date, and unbiased estimate of these preparations.

ABSTRACT

MANAGEMENT OF DRUG ADDICTS IN U. S. PENITENTIARY OF ATLANTA

In the Journal of the American Medical Association for April 6, 1929, Drs. C. T. Nellans and J. C. Massee reviewed their experience for two years in treating drug addicts in the United States Penitentiary at Atlanta. Hospitalization of these patients is necessary, both for the technical and for the moral effectiveness of the treatment. The situation in the penitentiary is unique in that the patient knows he has no recourse to plea or subterfuge which will procure the drug for him while he is in the institution. Neither is he able to fire his doctor. During the past two years at the Federal prison hospital 454 patients have been treated for addiction to the use of morphine or heroin. The method of treatment consists of absolute withdrawal of the drug with an initial dose of mild mercurous chloride and a daily dose of magnesium sulphate. Sedatives such as sulphonemethane and chloral are used freely, with simple measure such as sodium bicarbonate and orange or lemon juice to combat nausea. Perhaps the most powerful therapeutic agent is the absolute certainty which the patient has that he will not receive any more "junk," regardless of contingencies. When this is understood there is usually surprisingly little fuss and no remarkable objective indication of discomfort. Usually by the third day the patient's nausea, pains and muscular twitchings, either or all, when present, are over; his appetite has returned, and he seems much improved. He is discharged from the hospital and put to work as soon as possible, so that muscular fatigue may help him to sleep.

Because of the commonly understood danger of circulatory collapse in these cases careful daily blood pressure readings, and four hourly pulse and temperature observations were made during the patient's stay in the hospital. In no cases were there any symptoms of collapse that were sufficient to cause anxiety.

A relatively large percentage of the patients treated with narcosan showed fever, nausea and vomiting while a relatively small percentage of cases treated by withdrawal of the drug and supportive measures presented these symptoms.

In the experience of these authors sudden and complete withdrawal of narcotics has been a perfectly safe procedure. Narcosan, instead of being useful, actually makes the patient more uncomfortable.

BOOKS RECEIVED

Diseases of the Thyroid Gland. By Arthur E. Hertzler, M.D., Surgeon to the Halstead Hospital; with a chapter on Hospital Management of Goiter Patients by Victor E. Chesky, M.D., Associate Surgeon to Halstead Hospital. Second Edition, entirely rewritten.

Contains 286 pages. Publishers: The C. V. Mosby Company, St. Louis, Missouri.

Manson's Tropical Diseases. A Manual of the Diseases of the Warm Climates. Edited by Philip H. Manson-Bahr, M.D., Physician to the Hospital for Tropical Diseases, London; The Albert Dock Hospital; Lecturer at the London School of Hygiene and Tropical Medicine; Member of Colonial Research Committee; Lecturer on Tropical Diseases to the London Hospital, the West London Post-Graduate College, and the Northeastern Post-Graduate College. Ninth Edition revised. Contains 291 pages with 23 color plates, 12 half tone plates, 401 figures in the text, 6 maps and 43 charts. Publishers: Wm. Wood & Company, 156 Fifth Avenue, New York City.

Physical Therapeutic Technic. By Frank Butler Granger, M.D. Late Physician-in-Chief, Department of Physical Therapeutics, Boston City Hospital; Director of Physiotherapy, United States Army; Medical Counselor, United States Veterans Bureau; Member of Council on Physical Therapy, American Medical Association; Instructor of Physical Therapeutics, Harvard Medical School; Assistant Professor of Physical Therapy, Tufts Medical School. With a Foreword by William D. McFee, M.D., Boston, Mass. Octavo volume of 417 pages with 135 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth $6.50 net. W. B. Saunders Company, Philadelphia.

A Surgical Diagnosis. By J. Lewi Donhauser, M.D., Clinical Professor of Surgery, Albany Medical College (Union University); Asosciate Surgeon, Albany Hospital; Attending Surgeon, Child's Hospital, Albany. Contains 799 pages. Publishers: D. Appleton and Company, New York.

Principles of Pathology for Practitioners and Students. By H. D'Arcy Power, M.D., Professor of Pathology, College of Physicians and Surgeons, San Francisco; Dean and Professor of Medicine, San Francisco Polyclinic and Post-Graduate School; Visiting Physician, San Francisco County Hospital. And by William W. Hala, M.D., Assistant Professor of Pathology, Long Island College Hospital, Brooklyn, New York; Director of Pathology Department and Attending Pathologist to Kings County, Carson C. Peck Memorial, and Caledonian Hospitals, Brooklyn, New York. Contains 878 pages with 298 illustrations. D. Appleton and Company, New York City.

Diagnostic Methods and Interpretations in Internal Medicine. By Samuel A. Loewenberg, M.D., Assistant Professor of Clinical Medicine, Jefferson Medical College; Assistant Physician to the Jefferson Hospital; Visiting Physician to the Philadelphia General Hospital, the Northern Liberties Hospital and the Eagleville Sanatorium for Consumptives. Contains 1032 pages with 547 illustrations. Publishers: F. A. Davis Company, Philadelphia, Pennsylvania.

Clinical Electrocardiograms; Their Interpretation and Significance by Frederick A. Willius, M.D. Section on Cardiology, The Mayo Clinic, Rochester, Minnesota and Associate Professor of Medicine, the Mayo Foundation, University of Minnesota. Octavo of 219 pages with 368 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth $8.00.

A Manual of Diseases of the Nose, Throat and Ear, By E. B. Gleason, M.D., LL.D., Professor of Otology, Graduate School of the University of Pennsylvania. Sixth Edition, Thoroughly Revised. 12 mo of 617 pages with 262 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth $4.50 net.

Surgical Pathology. By William Moyd, M.D., Professor of Pathology, University of Manitoba, Winnipeg, Canada. Second Edition, Revised and Reset. Octavo of 933 pages, with 474 illustrations and 15 colored plates. Philadelphia and London: W. B. Saunders Company, March, 1929. Cloth, $11.00 net.

NEWS ITEMS

The ninth session of the Southern Pediatric Seminar will be held at Saluda, North Carolina, July 29th to August 10th. Dr. William A. Mulherin, Augusta, will give lectures on Acute Rheumatic Infections in Children; Lactic Acid Milk; and Preventative Pediatrics. Dr. W. L. Funkhouser, Atlanta, will give lectures on Chorea; Congenital Feeble Mindedness; and Habit Formation. Dr. A. J. Waring, Savannah, will give lectures on Enlarged Thymus, and Meningitis. The Souther Pediatric Seminar gives a post-graduate summer course in methods of diagnosis, prevention and treatment of diseases of children.

Dr. William F. Lake and Dr. A. J. Ayers are now associated in the practice of x-ray and clinical laboratory work and have opened new laboratories at 111 Medical Arts Building, Atlanta.

The fourth District Medical Society met at the Highland Country Club, LaGrange, on April 25. Dr. E. W. Glidden, Alto, read a paper on the Treatment of Tuberculosis; discussed by Drs. Guy J. Dillard, Columbus, and R. B. Gilbert of Greenville. Dr. Guy D. Ayer, Atlanta, read a paper on Headaches; discussed by Drs. Francis B. Blackmar, Columbus, and Maddin Avery, LaGrange. Drs. R. S. O'Neal, LaGrange, and Hugh McCulloh, West Point, gave lectures on Peptic Ulcers; discussed by Dr. Guy J. Dillard, Columbus.

Dr. W. A. Gardner announces the opening of offices at 420-1 Mortgage Guarantee Building, Atlanta, in connection with the Stone Mountain Sanitarium. Practice limited to neuro-psychiatry.

Dr. Lewis M. Smith announces the opening of his office at 410 Medical Arts Building, Atlanta.

The Lowndes County Medical Society met at the Little-Griffin Hospital, Valdosta, on May 10th as the guest of Drs. Albert F. Saunders and B. G. Owens, Valdosta. The June meeting of the society was held at the Twin Lakes hotel, Lake Park. The members were the guests of Dr. J. P. Prescott.

Dr. and Mrs. W. H. Garrison, Clarkesville, entertained the members of the Habersham County Medical Society and Woman's Auxiliary at their home on May 3rd.

The Georgia Hospital Association elected the following officers at its meeting held at Macon, May 7: Dr. C. S. Lentz, Augusta, President; Miss Annie Bess Feebeck, R. N., Atlanta, First Vice-President; Dr. Albert S. Saunders, Valdosta, Second Vice-President; J. B. Franklin, Atlanta, Secretary-Treasurer.

The Railway Surgeons Association met at Hotel Dempsey, Macon, May 7. The following officers were elected: Dr. J. W. Palmer, Ailey, President; Dr. Dr. Richard Binion, Milledgeville, Vice-President; Dr. Chas. H. Richardson, Jr., Macon, Secretary-Treasurer. The Scientific program consisted of papers entitled: Some Methods of Treating Burns, by Dr. Chas. H. Richardson, Jr., Macon; Early Management of Brain Injuries, by Dr. Richard Binion, Milledgeville; Colle's Fractures, by Dr. A. F. White, Flovilla. Dr. H. M. Michel, Augusta, led in a general discussion.

Dr. Wm. R. Smith announces the removal of his office to the Doctors' Building, 478 Peachtree Street, N. E., Atlanta.

Dr. I. H. Hunter, formerly of New Smyrna, Fla., has moved to Vienna and opened offices for the practice of medicine.

Notices of the Second International Malaria Congress that is to be held at Algiers during May, 1930, have been mailed by Acting Surgeon General of the Bureau of the Public Health Service, Washington, D. C.

Dr. W. Earl Quillian, Atlanta, was unanimously elected President of the Atlanta Civitan Club at a meeting held on May 22nd.

Macon Medical Society met at the Macon Hospital on May 21st. The Scientific program sonsisted of papers entiled: Surgical Clinics, by Dr. Chas. H. Richardson, Jr., Macon: Conservative Treatment of Eclampsia by Dr. O. R. Thompson, Macon.

Dr. Louis E. Schmidt, Chicago, lost his appeal to the Illinois State Medical Society for membership in the Chicago Medical Society after being expelled by the latter an account of his association with a clinic, the officers of which advertised in newspapers.

The post-graduate course given at Cordele in May by Dr. Jas. R. McCord, Atlanta, was attended by about fifty physicians. The following resolution was unanimously passed at the close of the lectures: "We heartily endorse the action of the State Board of Health in having instituted the Obstetric Post-Graduate Clinic now being held at Cordele, and commend most highly the efficient work being done therein by Dr. Jas. R. McCord. It, therefore, pleases us to ask that such work be continued." Signed. "G. Y. Moore, M.D., T. J. McArthur, M.D., V. O. Harvard, M.D., J. G. Dean, M.D., Committee.

The regular monthly meeting of the Spalding County Medical Society was held at the Griffin Hospital, Griffin, on May 14th.

Following a noteworthy service of 34 years with the house of Parke, Davis & Co., Dr. E. M. Houghton retired from active duty on May 1, but will continue as a member of the company's executive staff, with the title of Consulting Director of the Research and Biological Laboratories. In scientific circles, Dr. Houghton is widely known as a pioneer in the field of biological standardization, having started this work at the University of Michigan in 1894, and continuing at the Parke-Davis Biological Research Laboratories, which was the first institution of its kind in America.

The Eye, Ear, Nose and Throat Club of Georgia held its annual banquet at Hotel Dempsey, Macon, May 8th. The Scientific program consisted of a paper on Keratoconus by Dr. Grady E. Clay, Atlanta. Dr. Wm. O. Martin, Jr., Atlanta, and Dr. A. S. Bacon, Albany, led in the discussion. The club donated Fifty Dollars to the Abner Wellborn Calhoun Lectureship fund. A Program Committee consisting of Drs. A. G. Fort and Wm. L. McDougall, Atlanta, and I. W. Irvin, Albany, was appointed to arrange the program for the next annual meeting of the club. The following officers were elected for the ensuing year: Dr. Geo. B. Smith, Rome, President; Dr. Cecil Stockard, Atlanta, Vice-President; Dr. Wm. O. Martin, Jr., Atlanta, Secretary-Treasurer.

New Lork City, May 25.—The last year has seen the most widespread campaign for the prevention of blindness in the history of America, it is announced by Lewis H. Carris, managing director of the National Society for the Prevention of Blindness, today, in making public the Society's fourteenth annual report. The movement for the prevention of blindness now has behind it not only the organizations built up for this particular purpose, but also, the report shows, the medical profession, the field of education, organized labor, the safety movement, the profession of social work, federal, state and local governmental officers, and many groups of public spirited private citizens.

OBITUARY

Dr. R. Lee Cheney, Shellman, member; College of Physicians and Surgeons, Baltimore, 1888; aged 64; died at his home on May 21, 1929 of cerebral hemorrhage. He was a member of the Methodist church. Surviving him are his widow, one daughter, Miss Mary Cheney, Shellman; two sons: Dr. Huddy Cheney, Cairo, and Roy Cheney, Shellman. Funeral services were conducted by Rev. C. T. Clark and interment in the city cemetery.

Dr. John L. Walker, Waycross; member; Emory University School of Medicine, Emory University, Georgia, 1879; aged 75; died at his home on May 14, 1929. He was one of the foremost citizens of Waycross and Ware county and had taken a leading part in the building of his community. Dr. Walker was an active practitioner for forty-seven years. He had taken post-graduate work at the New York Polyclinic Medical School and Hospital, New York City, also at the Chicago Medical School. Dr. Walker served on the State Board of Medical Examiners and the State Board of Health for a number of years. He was at one time mayor of Waycross, and commissioner of Ware County. At the time of his death, he was chairman of the board of directors of the First National Bank. Surviving him are his widow, one daughter, Mrs. C. A. Witmer; two sons, Dr. Robert C., and Sam Walker, all of Waycross. Funeral services were conducted from the residence by Rev. J. N. Peacock and interment in the Lott cemetery, Waycross.

Dr. James E. Cunningham, LaFayette; Chattanooga Medical College, Chattanooga, Tennessee, 1874; aged 89; died at the home of his daughter, Mrs. W. M. Housch, Chickamauga, May 1, 1929. He was born and reared in Hartford, Kentucky, and came to Georgia when a young man. Dr. Cunningham was held in high esteem by all his acquaintances. Surviving him are his widow, six children, twenty-three grandchildren, seventy-three great-grandchildren, and two great-great-grandchildren. Funeral services were conducted by Rev. G. W. McClure from the residence of his daughter and interment in the Chickamauga cemetery.

Dr. Chas. A. Parke Ebbert, Grantville, member; Atlanta College of Physicians and Surgeons, 1903; aged 56; died in his office on May 16, 1929 of heart disease. He resided in Atlanta for a number of years and after becoming associated with the Atlanta and West Point Railroad, moved his offices to Grantville. He is survived by his widow. Funeral services were conducted by Rev. W. H. Major from the chapel of Sam R. Greenberg & Company and interment in West View Cemetery, Atlanta.

Dr. Benjamin R. Saxon, Sylvania, University of Georgia Medical Department, Augusta, 1876; aged 80; died at his home on May 16, 1929. He was born and reared in Screven county. After beginning the practice of medicine, he moved to Valdosta and lived there for seventeen years, then returned to his native village and county. Dr. Saxon was a high type of a gentleman and one of the few remaining of the old school. He was one of the pioneers and did a great amount of work for the advancement of his community. Surviving him are his widow and one son, Bowie Saxon, of Atlanta.

MEMBERS REGISTERING AT THE EIGHTIETH ANNUAL SESSION MACON, MAY 8, 9, 10, 1929

A

Abercrombie, T. F., Atlanta.
Adams, Charlie, Cordele.
Adams, F. L., Elberton.
Adams, G. B., Emory University.
Adams, I. H., Macon.
Adams, J. F., Macon.
Aldrich, F. N., Brunswick.
Alexander, Geo. H., Forsyth.
Allen, E. W., Milledgeville.
Allen, H. D., Jr., Milledgeville.
Allen, M. B., Hoschton.
Almond, C. B., Winder.
Alston, N. C., Richland.
Anderson, Carl L., Macon.
Anderson, E. B., Americus.
Anderson, J. C., Macon.
Anderson, J. M., Columbus.
Anderson, W. W., Atlanta.
Applewhite, J. D., Macon.
Askew, P. H., Nashville.
Atwood, George E., Waycross.
Aven, C. C., Atlanta.
Aycock, Mell, Atlanta.
Ayers, A. J., Atlanta.
Ayers, C. L., Toccoa.

B

Bacon, A. S., Albany.
Baggett, L. G., Atlanta.
Bailey, D. V., Elberton.
Bailey, E. M., Acworth.
Baird, N. W., Atlanta.
Baker, E. L., Columbus.
Baker, W. Pope, Atlanta.
Baldwin, Bradley, Gainesville.
Bancker, E. A., Jr., Atlanta.
Barge, A. A., Newnan.
Barnett, J. M., Albany.
Barrow, H. L., Macon.
Bashinski, Benjamin, Macon.
Battey, W. W., Augusta.
Baxley, W. W., Macon.
Baxter, J. H., Ashburn.
Bazemore, Wallace L., Macon.
Beard, J. S., Edison.
Bedingfield, W. E., Rentz.
Bell, Rudolph, Boston.
Benson, Marion T., Atlanta.
Bevans, Jas. L., Thomasville.
Binion, Richard, Milledgeville.
Bishop, E. L., Atlanta.
Bishop, L. H., Unadilla.
Bivings, Lee, Atlanta.
Blackburn, John D., Atlanta.
Blackford, L. Minor, Atlanta.
Blackman, W. W., Atlanta.
Blackshear, T. E., Macon.
Blanchard, H. H., Augusta.
Blincoe, Homer, Emory Uni-

versity.
Boland, Frank K., Atlanta.
Bonner, Lila M., Atlanta.
Born, W. H., McRae.
Bostwick, W. A., Milledgeville.
Bowcock, Harold, Atlanta.
Bowdoin, Joe P., Atlanta.
Branham, H. M., Brunswick.
Brannen, C. C., Moultrie.
Brawner, A. F., Atlanta.
Brawner, James N., Atlanta.
Brawner, Leon E., Atlanta.
Bridges, B. L., Ellaville.
Broaddrick, G. L., Dalton.
Broderick, J. Reid, Savannah.
Brown, C. T., Jr., Atlanta.
Brown, F. Bert, Augusta.
Brown, Stewart D., Royston.
Brown, Stephen T., Atlanta.
Bryan, S. H., Reynolds.
Bryant, V. L., Bartow.
Bullard, T. P., Palmetto.
Bunce, Allen H., Atlanta.
Burford, R. S., Brunswick.
Burns, J. K., Gainesville.
Busey, T. J., Fayetteville.
Bussell, B. R., Waycross.
Bridges, B. L., Thomaston.
Bush, A. R., Hawkinsville.
Byne, J. M., Jr., Augusta.
Byne, J. M., Waynesboro.
Byrd, Edwin S., Atlanta.

C

Cabaniss, W. H., Athens.
Caldwell, Allen F., Atlanta.
Calhoun, F. Phinizy, Atlanta.
Camp, R. T., Fairburn.
Camp, W. R., Fairburn.
Campbell, J. L., Atlanta.
Chaffin, E. F., Toccoa.
Champion, W. L., Atlanta.
Chandler, B. B., Athens.
Chaney, Ralph H., Augusta.
Chappell, R. J., Dudley.
Charlton, Thos. J., Savannah.
Cheek, O. H., Dublin.
Cheek, Pratt, Gainesville.
Chesnutt, T. H., Moultrie.
Christopher, F. E., Atlanta.
Clark, James J., Atlanta.
Clark, M. A., Macon.
Clark, T. H., Douglas.
Claxton, E. B., Dublin.
Clay, Grady E., Atlanta.
Clay, J. Emory, Macon.
Clements, J. R., Pelham.
Cline, B. McH., Atlanta.
Clodfelter, T. C., Forsyth.
Cofer, Olin S., Atlanta.
Coffee, W. P., Fitzgerald.
Coker, Grady N., Canton.
Coleman, A. S. M., Douglas.
Coleman, E. T., Graymont.
Coleman, Warren A., Eastman.
Coleman, Y. R., Macon.
Collinsworth, A. M., Macon.
Collier, Thomas J., Atlanta.
Cook, J. M., Sardis.
Cook, W. S., Albany.
Cooke, W. L., Columbus.
Corn, Ernest, Macon.
Corry, J. A., Barnesville.
Cox, C. G., Milledgeville.
Cowart, J. W., Walden.
Cranston, W. J., Augusta.
Cross, R. C., Winder.
Crawford, H. C., Atlanta.
Crozier, Gorden T., Valdosta.

D

Dancy, William R., Savannah.
Daniel, Walter W., Atlanta.
Darden, Horace, Sparta.
Daves, V. C., Vienna.
Davis, A. W., Warrenton.
Davis, E. B., Byromville.
Davis, Shelley C., Atlanta.
Davis, W. L., Albany.
Davidson, A. A., Augusta.
Davison, Hal M., Atlanta.
Davison, T. C., Atlanta.
Dean, J. G., Dawson.
Dees, J. H., Alston.
Derry, H. P., Macon.
Dimmock, A. M., Atlanta.
Dinsmore, V. F., Tifton.
Dobyns, W. F., Milledgeville.
Dorough, W. S., Atlanta.
Dorminy, J. N., Cordele.
Dorsey, R. T., Atlanta.
Doster, H. W., Rocky Ford.
Dougherty, M. S., Atlanta.
Dowman, Charles E., Atlanta.
Drane, Robert, Savannah.
Duffin, Chas. E., Swainsboro.
Duncan, John B., Atlanta.
DuVall, Beecher, Atlanta.

E

Earl, H. L., Sparta.
Eaton, Paul, Augusta.
Ebbert, C. A. P., Grantville.
Echols, Geo. L., Milledgeville.
Edmondson, J. W., Dublin.
Edgerton, M. T., Atlanta.
Edwards, W. W. Butler.
Elkin, D. C., Atlanta.
Elliott, W. G., Cuthbert.
Ellis, H. C., McDonough.
Elmore, B. V., Rome.
Elrod, J. O., Forsyth.
Emery, W. B., Atlanta.
Equen, Murdock, Atlanta.
Erickson, Mary J., Thomasville.
Estes, H. G., Atlanta.
Etheridge, I. H., Atlanta.
Evans, E. L., Tifton.

F

Faggart, Geo. H., Savannah.
Fancher, J. K., Atlanta.
Fishburne, Chas. C., Brunswick.
Fitts, John B., Atlanta.
Fleming, A., Folkston.
Florence, Loree, Augusta.
Floyd, Charles S., Loganvlile.
Floyd, Earl, Atlanta.
Floyd, J. T., Atlanta.
Floyd, Waldo E., Statesboro.
Fort, A. G., Atlanta.
Fort, M. A., Bainbridge.
Fountain, James A., Macon.
Fowler, R. W., Marietta.
Franklin, R. C., Swainsboro.
Fuller, George W., Atlanta.
Fullilove, H. M., Athens.
Funkhouser, W. L., Atlanta.

G

Gardner, W. A., Stone Mountain.
Garrard, J. A., Roberta.
Garrard, J. I., Milledgeville.
Garrison, W. H., Clarkesville.
Gary, Loren, Georgetown.
Gay, Thos., Bolling, Atlanta.
Gerdine, John, Jersey.
Gerdine, Linton, Athens.
Gilbert, R. B., Greenville.
Gilliam, O. D., Columbus.
Gleaton, E. N., Savannah.
Gober, W. M., Marietta.
Goodpasture, W. C., Atlanta.
Goodwyn, H. J., Carrollton.
Goodwyn, Thos. P., Atlanta.
Goolsby, R. C., Jr., Macon.
Goolsby, R. C., Sr., Forsyth.
Gostin, B. S., Macon.
Graves, J. R., Zebulon.
Gray, J. D., Augusta.
Green, A. J., Union City.
Greene, B. W., Macon.
Greene, Ed H., Atlanta.

Greer, Charles A., Oglethorpe.
Grubbs, J. H., Molena.
Gunter, G. O., Newton.

H

Haddock, S. H., Millen.
Hailey, Howard, Atlanta.
Hall, F. W., Summerville.
Hall Thomas H., Macon.
Hamilton, R. E., Douglasville.
Harison, J. F., Atlanta.
Harper, G. T., Dewy Rose.
Harper, T. F., Coleman.
Harrington, F. Y., Macon.
Harris, E. C., Rochelle.
Harris, E. R., Winder.
Harris, Jack C., Atlanta.
Harrison, M. T., Atlanta.
Harrold, Charles C., Macon.
Harrold, Thomas, Macon.
Harvard, V. O., Arabi.
Haslam, J. E., Fort Valley.
Hawkins, T. I., Griffin.
Head, M. M., Zebulon.
Helton, B. L., Sandersville.
Hembree, J. A., Macon.
Henderson, D. T., Macon.
Hendry, J. H., Bainbridge.
Highsmith, E. D., Atlanta.
Hill, Roy A., Thomasville.
Hilsman, A. H., Albany.
Hind, J. C., Reynolds.
Hinton, Charles C., Macon.
Hodges, Charles A., Dublin.
Hodges, J. H., Hapeville.
Hodgson, Fred G., Atlanta.
Holliday, Paul L., Athens.
Holmes, Champ H., Atlanta.
Holmes, J. P., Macon.
Holmes, L. P., Augusta.
Holmes, W. B., Wadley.
Holmes, Walter R., Atlanta.
Hoppe, L. D., Atlanta.
Houston, W. R., Augusta.
Housworth, D., Douglasville.
Howard, Lee, Savannah.
Huguley, G. Pope, Atlanta.
Humphries, W. C., Griffin.
Hutchins, E. H., Sparta.

I

Irvin, I. W., Albany.

J

Jenkins, H. B., Sandersville.
Jenkins, J. C., Hartwell.
Jernigan, C. S., Sparta.
Jernigan, H. W., Atlanta.
Johnson, C. D., Columbus.
Johnson, Raymond L., Waycross.
Johnson, R. E. L., Roberta.
Johnson, Trimble, Atlanta.
Johnston, T. H., Douglas.
Joiner, B. O., Tennille.
Jones, Jack W., Atlanta.
Jones, William T., Atlanta.
Jordan, J. R., Ellaville.

K

Kay, J. B., Byron.
Keaton, J. C., Albany.
Keen, O. F., Macon.
Keiser, John M., Macon.
Kelly, G. L., Augusta.
Kenyon, J. M., Richland.
Kenyon, Steve P., Dawson.
Kemp, A. P., Macon.
King, J. L., Macon.
King, John T., Thomasville.
Kirkland, S. A., Atlanta.
Kiser, J. M., Atlanta.
Kite, J. H., Decatur.
Klugh, George F., Atlanta.
Kracke, Roy R., Emory University.

L

Lake, William F., Atlanta.
Lancaster, E. M., Shady Dale.
Landham, J. W., Atlanta.
Lang, G. H., Savannah.
Lanier, L. I., Soperton.
Leadingham, R. S., Atlanta.
Lewis, John R., Louisville.
Lewis, S. J., Augusta.
Liggin, S. B., Reynolds.
Linch, A. O., Atlanta.
Loden, G. L., Colbert.
Logan, J. C., Plains.
Lokey, Hugh M., Atlanta.
Lord, C. B., Jefferson.
Lowe, W. R., Midville.
Lundy, L. L., Boston.
Lunsford, Guy G., Cordele.
Lyle, W. C., Atlanta.

M

Maddox, Robert C., Rome.
Maloy, C. J., Helena.
Maloy, W. F., Milan.
Mann, Frank, McRae.
Martin, F. M., Shellman.
Martin, James J., Atlanta.
Martin, J. W., Macon.
Martin, L. W., Atlanta.
Martin, R. V., Savannah.
Martin, Wm. O., Jr., Atlanta.
Massee, J. C., Atlanta.
Massenburg, G. Y., Macon.
Matthews, M. F., Athens.
McAfee, J. C., Macon.
McAfee, L. C., Macon.
McAllister, J. M. C., Rochelle.
McArthur, Thos. J., Cordele.
McCall, J. T., Rome.
McClintic, J. K., Monroe.
McClure, R. E., Quitman.
McCord, M. M., Rome.
McCullough, W. H., Atlanta.
McCurdy, E. C., Shellman.
McCurry, W. E., Hartwell.
McDonald, E. M., Jefferson.
McDonald, H. P., Atlanta.
McDougall, J. Calhoun, Atlanta.
McDougall, Wm. L., Atlanta.
McElroy, S. L., Ocilla.
McElveen, J. M., Brooklet.
McGahee, R. C., Warrenton.
McGee, H. H., Savannah.
McMaster, D. E., Tennille.
McMichael, J. R., Quitman.
McRae, Floyd W., Atlanta.
Mercer, J. E., Vidalia.
Meriwether, W. W., Macon.
Miles, W. C., Griffin.
Miller, R. L., Waynesboro.
Miller, W. A., Arabi.
Mims, F. C., Atlanta.
Minchew, B. H., Waycross.
Mobley, J. W., Jr., Milledgeville.
Mobley, J. W. Sr., Milledgeville
Mobley, W. E., Macon.
Montgomery, R. C., Butler.
Mooney, A. J., Statesboro.
Moore, G. Y., Cuthbert.
Moore, H. M., Thomasville.
Morrison, A. A., Savannah.
Moseley, J. H., Macon.
Moses, W. M., Uvalda.
Mulherin, Wm. A., Augusta.
Murphey, Eugene E., Augusta.
Myers, Wm. H., Savannah.

N

Neill, Frank K., Albany.
Nelson, G. W., Marshallville.
Newberry, R. E., Atlanta.
Newman, W. A., Macon.
Newton, R. G., Macon.
Nicolson, Wm. Perrin, Jr., Atlanta.
Norman, Frank P., Columbus.

O

Oertel, T. E., Augusta.
Oppenheimer, Russell H., Emory University.
Osborne, L. S., Fitzgerald.
Osborne, L. S., Fitzgerald.
Osborne, V. W., Atlanta.
Owensby, N. M., Atlanta.

P

Page, Hugh N., Augusta.
Palmer, J. W., Ailey.
Parker, G. M., Carnesville.
Parkerson, I. J., Eastman.
Patterson, F. D., Cuthbert.
Patterson, J. C., Cuthbert.
Paullin, J. E., Atlanta.
Peacock, C. A., Columbus.
Peacock, E. S., Harrison.
Pearson, Colquit, Cartersville.
Pendergrass, R. C., Americus.
Penland, J. E., Waycross.
Pennington, C. L., Macon.
Pentecost, M. P., Atlanta.
Perkinson, W. H., Marietta.
Phillips, A. M., Macon.
Pickett, C. E., Richland.
Pierce, N. H., Suwanee.
Pinson, C. H., Hapeville.
Pitman, J. F., Thomasville.
Pittard, L. Y., Monticello.
Pittman, C. S., Tifton.
Pool, E. T., Lavonia.
Porch, Leon D., Macon.
Primrose, A. C., Americus.
Prather, W. S., Americus.
Proge, L. H., Atlanta.
Pruitt, M. C., Atlanta.
Pumpelly, Wm. C., Macon.
Pund, Edgar R., Augusta.

Q

Quattlebaum, Julian K., Savanr

R

Rawlings, F. B., Sandersville.
Rawls, L. L., Macon.
Rayle, A. A., Athens.
Redd, Stephen C., Atlanta.
Redfearn, J. A., Albany.
Reavis, W. F., Waycross.
Reese, D. S., Carrollton.
Respess, Herbert, Macon.
Revell, S. T. R., Louisville.
Reynolds, H. I., Athens.
Rhodes, Jno. A., Crawfordville.
Richards, W. R., Calhoun.
Richardson, C. H., Jr., Macon.
Richardson, C. H., Sr., Montezuma.
Richardson, R. W., Macon.
Ridley, C. L., Macon.
Riley, J. H., Perry.
Ritch, T. G., Jesup.
Roberts, Charles W., Atlanta.
Roberts, M. H., Atlanta.
Roberts, O. W., Carrollton.
Robertson, J. R., Augusta.
Rogers, A. A., Commerce.
Rogers, T. E., Macon.
Robinson, Hugo, Albany.
Rollins, J. C., Dalton.
Ross, James T., Macon.
Ross, S. T., Winder.
Rouglin, Louis C., Atlanta.
Rozar, A. A., Macon.
Rushin, C. E., Atlanta.

S

Sage, Dan Y., Atlanta.
Sanchez, S. E., Barwick.
Sanford, S. P., Atlanta.
Sauls, H. C., Atlanta.
Saunders, A. F., Valdosta.
Savage, C. P., Montezuma.
Scales, S. F., Carrollton.
Seckinger, D. L., Savannah.
Selman, W. A., Atlanta.
Schneider, J. F., Atlanta.
Scott, W. M., Milledgeville.
Seawright, E. C., Fayetteville.
Sessions, J. H., Homerville.
Shallenberger, W. T., Atlanta.
Shanks, E. D., Atlanta.
Sharp, C. K., Arlington.
Shearouse, Wm., Savannah.
Shippey, Stuart H., Atlanta.
Sigman, John M., Macon.
Simmons, B. K., Blakely.
Simmons, J. W., Brunswick.
Sinkoe, Samuel J., Atlanta.
Slack, Henry R., LaGrange.
Smith, A. C., Elberton.
Smith, E. J., Hahira.
Smith, Ernest L., Eastman.
Smith, George B., Rome.
Smith, J. M., Cochran.
Smith, M. R., Cordele.
Smith, S. S., Athens.
Smith, William A., Atlanta.
Smith, W. T., Tifton.
Sanders, A. S., Atlanta.
Spivey, O. S., Macon.
Spooner, John I., Donalsonville.
Statham, J. C., Milledgeville.
Stewart, W. K., Union Point.
Stockard, Cecil, Atlanta.
Story, F. C., Jesup.
Stukes, J. T., Americus.
Swanson, Cosby, Atlanta.
Swint, R. C., Milledgeville.
Sydenstricker, V. P., Augusta.

T

Talley, R. E., Trion.
Taylor, Ralph L., Davisboro.
Teasley, B. C., Hartwell.
Temples, P. M., Rome.
Thompson, C., Millen.
Thompson, O. R., Macon.
Thompson, William C., Dublin
Thornton, Lawson, Atlanta.
Trimble, Geo. C., East Point.
Toepel, Theodore, Atlanta.
Treusch, Herbert L., Atlanta.
Tribble, J. M., Senoia.
Turner, W. J., Ashburn.
Tye, James P., Albany.
Tye, Robert L., McDonough.
Tyre, J. Lawton, Screven.

U

Upchurch, W. A., Atlanta.
Upshaw, C. B., Atlanta.

V

Vansant, T. J., Woodstock.
Vernou, Eugene R., Atlanta.
Veiks, Thos. E., Wrightsville.
Vinson, C. D., Atlanta.

W

Wahl, Ernest L., Thomasville.
Waits, Charles E., Atlanta.
Walker, C. H., Macon.
Walker, D. D., Macon.
Wall, C. K., Thomasville.
Wall, J. C., Eastman.
Wallace, J. W. Thomasville.
Ward, J. B., Macon.
Ware, D. B., Fitzgerald.
Ware, F. L., Warrenton.
Ware, Ford, Americus.
Watkins, E. C., Brooklet.
Watt, Chas. H., Thomasville.

Weaver, D. G., Macon.
Weaver, O. H., Macon.
Webb, Fred L., Macon.
Welch, L. L., Marietta.
Whelchel, A. J., Cordele.
Whelchel, Cleveland D., Gainesville.
White, A. F., Flovilla.
Whitley, L. L., Crawford.
Whiteside, J. H., Statesboro.
Wilkinson, W. L., Bainbridge.
Williams, George A., Atlanta.
Williams, R. L., Columbus.
Williams, W. A., Macon.
Winchester, M. E., Atlanta.
Winship, Herring, Macon.
Wise, B. T., Americus.
Wood, James A., Atlanta.
Wright, J. J. C., Doerun.

Y

Yampolsky, Joseph, Atlanta.
Yankey, W. E., Atlanta.
Yarbrough, G. H., Milledgeville.
Yawn, B. W., Eastman.
York, J. H., Atlanta.
Young, W. W., Atlanta.
Youmans, C. R., Milledgeville.

Z

Zachary, J. D., Gray.

GUESTS AND VISITORS

Arnold, Wilbur O., West Palm Beach, Fla.
Baer, William S., Baltmore, Maryland.
Bowers, Leora G., Dayton, Ohio.
Bryan, W. M., U. S. P. H. S., Savannah.
Damren, F. L., Augusta.
Fishbein, Morris, Chicago, Illinois.
Fowler, A. H., Langley, South Carolina.
Howell, J. R., Aiken, South Carolina.
Jordan, W. B., Homestead, Florida.
Sellers, T. F., State Board of Health.
Shomann, W. E., Andersonville, S. C.
Turner, Janie, University of Georgia Medical Department.
Van De Vrede, Jane, Georgia State Nurses Association.
Zeller, T. C., McKeesport, Pennsylvania.

CONSTITUENT COUNTY SOCIETIES, 1929*

County	President	Secretary
Baldwin	U. S. Bowen, Milledgeville	J. W. Mobley, Jr., Milledgeville
Banks		Mat P. Deadwyler, Maysville
Barrow		W. L. Mathews, Winder
Bartow	W. E. Wofford, Cartersville	A. L. Horton, Taylorsville
Ben Hill	Frank Ward, Fitzgerald	L. S. Osborne, Fitzgerald
Bibb	C. L. Ridley, Macon	R. C. Goolsby, Jr., Macon
Blue Ridge	J. M. Daves, Blue Ridge	C. B. Crawford, Blue Ridge
Brooks	G. D. Dorough, Quitman	R. E. McClure, Quitman
Bulloch-Candler		W. E. Simmons, Metter
Burke	W. H. Sutton, Midville	William R. Lowe, Midville
Butts	A. F. White, Flovilla	R. L. Hammond, Jackson
Campbell	T. P. Bullard, Palmetto	A. J. Green, Union City
Carroll	L. E. Wilson, Bowdon	H. J. Goodwyn, Carrollton
Chatham	H. T. Exley, Savannah	A. A. Morrison, Savannah
Chattooga	B. F. Shamblin, Lyerly	H. D. Brown, Summerville
Cherokee	George C. Brooke, Canton	Grady N. Coker, Canton
Clarke	C. J. Decker, Athens	A. A. Rayle, Athens
Clayton-Fayette	T. J. Busey, Fayetteville	H. D. Kemper, Jonesboro
Cobb		L. L. Welch, Marietta
Coffee	T. H. Clarke, Douglas	W. L. Hall, Nicholls
Colquit	W. L. Bennett, Moultrie	T. H. Chesnutt, Moultrie
Cook		W. M. Shepard, Adel
Coweta		A. A. Barge, Newnan
Crisp	T. E. Bradley, Cordele	J. N. Dorminy, Cordele
Decatur-Seminole	E. C. Smith, Donalsonville	John I. Spooner, Donalsonville
DeKalb	C. L. Allgood, Scottdale	J. R. Evans, Decatur
Dooly	L. H. Bishop, Unadilla	F. E. Williams, Vienna
Dougherty	F. K. Neill, Albany	I. M. Lucas, Albany
Douglas	C. V. Vansant, Douglasville,	D. Houseworth, Douglasville

Elbert	A. S. J. Stovall, Elberton	B. B. Mattox, Elberton
Emanuel	V. E. Franklin, Graymont	R. C. Franklin, Swainsboro
Evans	George W. Elarbee, Daisy	S. T. Ellis, Claxton
Floyd	A. H. Dellinger, Rome	C. H. McArthur, Rome
Forsyth		J. A. Otwell, Cumming
Franklin	Stewart D. Brown, Royston	B. T. Smith, Carnesville
Fulton	Charles E. Waits, Atlanta	Howard Hailey, Atlanta
Glynn	H. L. Akridge, Brunswick	F. N. Aldrich, Brunswick
Gordon	W. R. Barnett, Calhoun	Z. V. Johnston, Calhoun
Grady	J. E. Harden, Whigham	J. V. Rogers, Cairo
Greene		Goodwin Gheesling, Greensboro
Gwinnett		D. C. Kelley, Lawrenceville
Habersham	W. H. Garrison, Clarkesville	R. B. Lamb, Demorest
Hall	C. J. Wellborn, Gainesville	Pratt Cheek, Gainesville
Hancock	H. L. Earl, Sparta	C. S. Jernigan, Sparta
Haralson		William H. Malone, Tallapoosa
Hart	G. T. Harper, Dewy Rose	W. E. McCurry, Hartwell
Henry	J. G. Smith, McDonough	H. C. Ellis, McDonough
Houston-Peach	J. H. Riley, Perry	H. E. Evans, Perry
Jackson	H. E. Crow, Talmo	J. C. Bennett, Jefferson
Jefferson	Walter P. Holmes, Wadley	S. T. R. Revell, Louisville
Jenkins	M. E. Perkins, Millen	C. Thompson, Millen
Jones	W. J. Waits, Gray	J. D. Zachary, Gray
Lamar	C. H. Willis, Barnesville	J. M. Rogers, Barnesville
Laurens	A. T. Coleman, Dublin	O. H. Cheek, Dublin
Lowndes		Joseph A. Thomas, Valdosta
Macon		C. P. Savage, Montezuma
Madison	R. J. Westbrook, Ila	W. D. Gholston, Danielsville
Meriwether		R. B. Gilbert, Greenville
Mitchell	C. L. Roles, Camilla	C. A. Stevenson, Camilla
Monroe	R. C. Goolsby, Sr., Forsyth	J. O. Elrod, Forsyth
Montgomery		J. E. Hunt, Mount Vernon
Morgan	J. L. Porter, Rutledge	D. M. Carter, Madison
Muscogee		F. B. Schley, Columbus
Newton		W. D. Travis, Covington
Ocmulgee	Ernest L. Smith, Eastman	A. R. Bush, Hawkinsville
Pickens		H. G. Atherton, Jasper
Pike	J. H. Grubbs, Molena	M. M. Head, Zebulon
Polk		P. O. Chaudron, Cedartown
Putnam	V. H. Taliaferro, Eatonton	E. F. Griffith, Eatonton
Rabun		J. A. Green, Clayton
Randolph	W. G. Elliott, Cuthbert	G. Y. Moore, Cuthbert
Richmond	G. T. Bernard, Augusta	C. D. Ward, Augusta
Screven	E. E. Downing, Newington	H. W. Doster, Rocky Ford
Spalding	C. F. Griffith, Griffin	H. J. Copeland, Griffin
Stephens	W. H. Swain, Martin	C. L. Ayers, Toccoa
Stewart-Webster	R. L. Grier, Lumpkin	J. M. Kenyon, Richland
Sumter	J. T. Stukes, Americus	Sylvester, Cain, Jr., Plains
Taliaferro	T. C. Nash, Philomath	A. T. Ray, Sharon
Talbot	J. E. Peeler, Woodland	C. C. Carson, Talbotton
Tattnall	G. W. Tootle, Glennville	J. M. Hughes, Glennville
Taylor	W. W. Edwards, Butler	J. C. Hind, Reynolds
Telfair	W. H. Powell, Lumber City	C. J. Maloy, Helena
Terrell		Logan L. Thomas, Dawson
Thomas	Mary J. Erickson, Thomasville	C. K. Wall, Thomasville
Tift	W. T. Smith, Tifton	C. S. Pittman, Tifton
Toombs		W. W. Odom, Lyons
Treutlen		L. I. Lanier, Soperton
Tri—(Calhoun, Early, Miller)		W. O. Shepard, Bluffton
Tri—(Liberty, Long, McIntosh)	I. G. Armistead, Warsaw	B. H. Gibson, Allenhurst

Troup	H. McCulloh, West Point	H. McCulloh, Jr., West Point
Turner	R. D. Rawlins, Rebecca	J. H. Baxter, Ashburn
Upson	C. A. Harris, the Rock	R. L. Carter, Thomaston
Walker	M. W. Spearman, Chickamauga	J. H. Hammond, LaFayette
Walton	H. L. Upshaw, Social Circle	J. K. McClintic, Monroe
Ware	C. M. Stephens, Waycross	K. McCullough, Waycross
Warren	F. L. Ware, Warrenton	R. C. McGahee, Warrenton
Whitfield	R. L. Taylor, Davisboro	B. L. Helton, Sandersville
Wayne	J. L. Tyre, Screven	A. J. Gordon, Jesup
Washington	R. S. Bradley, Dalton	E. O. Shellhorse, Dalton
Wilkes	L. M. Ellis, Washington	H. T. Harriss, Washington
Worth		G. S. Sumner, Poulan

*If the secretaries of county securities will kindly report the names of officers omitted to the Secretary-Treasurer, they will be included in the roster of officers of future reports and he Directory issue of the Journal.

THE PARANASAL SINUSES AS FOCI OF INFECTION

(Continued from Page 268)

drops. In many cases suction applied to the nose is a great aid in inducing drainage. Sometimes it is necessary to wash out an antrum, or to remove a middle turbinate; and in rare cases with severe complications threatening, radical operative procedure will have to be resorted to; but as a general rule, it is wisest to refrain from operative interference in the acute stage where possible.

Subacute sinus infection will sometimes respond to the conservative treatment outlined above; but as a rule some form of operative work will have to be done.

In chronic sinusitis, the course of treatment depends upon the type of infection. If there is a suppurative process without much change in the mucous membrane good surgical drainage is sufficient. If there is much polypoid, degenerative change in the mucous membrane, it will be necesary to resort to radical operative procedure as all of the diseased membrane must be removed in order to effect a cure.

In closing, I realize that this paper has been sketchy; but I have endeavored to cover a broad field, and time would not permit dwelling much in detail on any one point.

BIBLIOGRAPHY

1. Sluder, Greenfield: Headache and Eye isorders of Nasal Origin. C. V. Mosby Co.
2. Reste, E.: Press Med. Vol. 24, p. 321. uly 24, 1916.
3. Sargent, E.: Bull. et Mem. Soc. de Hosp. de Paris, July 28, 1918.
4. Dean, L. W.: Jour. Amer. Med Assoc., Aug. 1, 1925. Vol. 85, p. 317.
5. Mullin, W. C.: Trans. Amer. Laryn, Rhin and Otol Soc., 1919.
6. Clerf, Louis H.: Arch. of Otolaryn. July, 1927. Vol. 6.

AMERICAN MEDICAL ASSOCIATION MEETING AND THE COLUMBIA RIVER HIGHWAY

A wonderful paved highway extending for 218 miles along the mighty Columbia River, the second largest river in the United States, beckons to the tourist. It discloses to the traveler some of the most awe-inspiring and majestic scenery in the world. It is America's newest and greatest pathway for the recreationist. Its beauty is a combination of the wonders of the Alps, the Rhine, and Southern Italy with the wild grandeur of the American Rockies. The construction of the roadway is in itself, a remarkable engineering accomplishment.

From Portland to the Pacific Coast, the Highway gives glimpses of the wonderful

Lake Louise. See Canadian Rockies

Banff Rock in Caandian Rockies

farming country of the lower Columbia. It winds in and out among the low hills bordering the river, giving vantage for views of splendor in color and form, while constantly the vista of river shore and water commerce changes. Then it carries the traveler through Astoria, a port city at the river's mouth, and on to Gearhart and Seaside.

Going East from Portland, this wonder highway pierces the heretofore inaccessible gorge of the Columbia, and in these upper stretches of the Highway are found 96 miles of cliffs and falling waters—matchless colors of shore and sky. In many places, hanging on cliffs, hundreds of feet above the river in others, spanning turbulent streams on high concrete and steel bridges, supported by quaint walls of dry masonry for miles at other places, the Highway continues its way with a crest at Crown Point 700 feet above the river, giving a view of 35 miles in either direction.

The building of the Columbia Highway has opened to view the great wonders of the Columbia Gorge, heretofore only accessible from the railroad. From Crown Point the roadway winds down an easy 5 per cent grade through the "figure eight" and enters the district of water falls. In 10 miles of travel 11 beautiful water falls are passed, the highest being Moultnomah Falls, second highest in the United States; Latourell Falls, Shepperd's Dell, Bridal Veil, Coopey Falls, Dalton Falls, Mist Falls, Wahkeena Falls, Benson Park and Multnomah Falls, Oneonta Gorge where a subterranean stream sends air blasts along the rocks, Horsetail Falls,, Cathedral Point and St. Peter's Dome pass in quick succession and the traveler is at Bonneville. Here is located the greatest fish hatchery in the world.

Then on to Eagle Creek park, the Cascades of the Columbia, Mitchell's Point tunnel, the sunken forests of the Columbia, the abutments of the Bridge of the Gods, and into the Hood River Valley.

From Hood River the main highway continues to The Dalles, one of the most beautiful stretches of the whole highway, and then merges into the Old Oregon Trail, which is the finest highway across the continent.

AMERICAN MEDICAL ASSOCIATION MEETING TOURS AND COSTS

Itinerary to Portland and Six Optional Returns From Portland

June 28th—Leave Atlanta, Ga., at 6:30 P. M. "Dixie Limited."
June 29th—Arrive Chicago at 2:35 P. M., leaving via the C. & N. W. R. R., at 6:30 P. M. Party convenes at Chicago & Northwestern Station.
June 30th—Arrive St. Paul at 7:05 A. M. Auto sightseeing tour of the city. And leave Minneapolis at 11:40 A. M. via Soo Line.
July 1st—Enroute.
July 2nd—Arrive Banff, via the Canadian Pacific line at 8:05 A. M. Automobiles will meet us upon our arrival and take us for a trip, visiting Bow Falls, Tunnel Mountain, Buffalo Park and the Zoo, the Cave and the Basin, and the golf links. The afternoon will be at disposal of the tour members. Sleeping accommodations will be provided in our special Pullman car.
July 3rd—At Banff. A motor trip in the morning will take us to Johnston Canyon with a 45-minute stopover there. There will be frequent opportunities to see wild life. Automobiles will take us to Lake Louise.
July 4th—At Lake Louise. A wonderful motor drive of 22 miles into the heart of the main part of the Rockies, visiting Moraine Lake and the Valley of Ten Peaks.
July 5th—Leave Lake Louise via the Canadian Pacific at 9:55 A. M.
July 6th—Arrive Vancouver at 7:45 A. M. connecting with steamer leaving at 10:30 A. M. for daylight sail down Puget Sound. Arrive Victoria at 2:30 P. M., where automobiles will be waiting to take us for a sight-seeing trip about the city, returning us to steamer in time to sail at 4:30 P. M. Arrive at Seattle 8:30 P. M., and leave via Union Pacific Line at 11:15 P. M.
July 7th—Arrive Portland at 6:15 A. M. Room with bath at Hotel Multnomah or Imperial.

Optional Return No. 1-A.

July 12th—Leave Portland via Northern Pacific at 8:00 P. M.
July 13th—Enroute.
July 14th—Arrive Gardner at 11:15 A. M., where connection is made for auto tour consuming 4 1-2 days through Yellowstone National Park. Stopovers will be made nights at Mammoth Hot Springs, Old Faithful and Canyon Lodges. Our exit via Cody Road will be a fitting climax to this delightful tour.
July 18th—Leave Cody via the Northern Pacific at 8:30 P. M.
July 19th—Enroute.
July 20th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."
July 21st—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 2-B

July 12th—Leave Portland via S. P. & S. R. R. at 8:00 P. M.
July 13th—Arrive Glacier Park at 9:12 P M., stopping at Glacier Park Hotel. A 3-day tour of the Park, dividing our time between Many Glacier Hotel, Going-to-the-Sun Chalet and Glacier Hotel.
July 16th—Leave Glacier Park via Great Northern at 9:12 P. M.
July 17th—Enroute.
July 18th—Arrive Chicago at 7:55 P. M. and leave at 10:30 P. M. via "Dixie Flyer."
July 19th—Arrive Atlanta, Ga., at 6:55 P. M.

Optional Return No. 3-C.

July 12th—Leave Portland via Union Pacific at 4:00 P. M.
July 13th—Enroute.
July 14th—Arrive West Yellowstone at 7:30 A. M., connecting with motor coach for 4 1-2 day tour of Yellowstone National Park, stopping over nights at Old Faithful, Grand Canyon and Mammoth Hot Springs Lodges.
July 18th—Leave West Yellowstone at 7:00 P. M.
July 19th—Arrive Salt Lake City at 7:30 A. M. Automobiles will take us for trip around city and visit will be made to the Mormon Tabernacle. Luncheon will be served at

the Utah Hotel. The afternoon will be at disposal of members, and leave Salt Lake City via D. & R. G. R. R. at 6:00 P. M.

July 20th—Pass through the Royal Gorge n the early afternoon. Arrive Colorado Springs at 6:20 P. M.

July 21st—Automobiles will take us for a trip to the Garden of the Gods, Cave of the Winds, and Seven Falls. Leave Colorado Springs via Rock Island Lines at 8:30 P.M.

July 22nd—Enroute.

July 23rd—Arrive Chicago at 6:59 A. M. and leave at 10:00 A. M. via "The Flamingo."

July 24th—Arrive Atlanta, Ga., at 8:40 A. M.

Optional Return No. 4-D

July 12th—Leave Portland via Southern Pacific at 9:00 P. M.

July 13th—Enroute.

July 14th—Arrive San Francisco at 7:50 A. M., stop at St. Francis Hotel.

July 15th—Leave San Francisco via Southern Pacific at 8:00 P. M.

July 16th—Arrive Los Angeles at 9:30 A. M. Room with bath at Hotel Clark. Auto tour to Hollywood and the beaches included.

July 17th—Leave Los Angeles via Santa Fe R. R. at 12:01 P. M. (Noon.)

July 18th—Arrive Grand Canyon at 8:20 A. M. Breakfast, luncheon and dinner at El Tovar Hotel. Auto drive along Hermit Rim Road. Leave Grand Canyon via Santa Fe at 7:35 P. M.

July 19th and 20th—Enroute.

July 21st—Arrive Chicago at 10:00 A. M., and leave at 2:00 P. M. via "Dixie Limited."

July 22nd—Arrive Atlanta, Ga., at 8:55 A. M.

Optional Return No. 5-E

This comprises direct return to Atlanta by rail.

Optional Return No. 6-F

This comprises return to Atlanta by rail via San Francisco

Prices

Atlanta to Atlanta—Tour No. 1 and 1-A	$355.00
Atlanta to Atlanta—Tour No. 1 and 2-B	345.75
Atlanta to Atlanta—Tour No. 1 and 3-C	383.00
Atlanta to Atlanta—Tour No. 1 and 4-D	370.40
Atlanta to Atlanta—Tour No. 1 and 5-E	250.25
Atlanta to Atlanta—Tour No. 1 and 6-F	266.50

Itinerary to Portland and six optional returns from Portland include all cost of transportation, Pullman, hotels and meals to Portland; room in one of the best hotels at Portland while there; transportation, and Pullman with meals at Yellowstone Park on return. On return trips 5E and 6F only rail transportation is included.

For reservations address: American Express Company, 91 Luckie St., N. W., Atlanta, Ga. *Or* Medical Association of Georgia, 139 Forrest Avenue, N. E., Atlanta, Georgia.

SURGICAL BELTS, CORSETS AND SUPPORTS

We specialize in making and fitting surgical belts, corsets, abdominal supports and maternity garments. Camp belts for the relief of sacro-iliac sprain, gastroptosis, enteroptosis, floating kidney, and spinal curvature are carried in stock. Also supply of shoulder braces, nursing brassiers, nursing shields, artificial busts, bust supports and reducing rollers and girdles.

Abdominal supports and sacro-iliac belts are fitted to men.

Only professional services rendered.

"Eager to Please"

MISSES EAGER and SIMPSON
8 N. Forsyth Street
ATLANTA

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII July, 1929 No. 7

ADDRESS BEFORE THE TWELTH DISTRICT MEDICAL SOCIETY*

WILLIAM R. DANCY, M. D. PRES.
Savannah

We often hear that the first shall be last and the last shall be first. Such is true of the present instance. It is indeed pleasing that the 12th District Medical Society—the last by number of our district medical societies, should be the first to hold its meeting during my administration. I trust that it will always strive to be first not only in this respect but in carrying out the policies, plans and ideals of the Medical Association of Georgia, which is its parent organization. The locality and support rendered by your splendid society in the past, convinces me that you can be depended on during the coming year. Our program is an ambitious one and without your cooperative help, the officers of the association feel that the maximum results cannot be attained.

What I am about to tell you is essentially a business talk, not an after dinner speech. I am sure you would enjoy the latter more but I feel that you, the individual members, should know of certain problems facing your state association and what it is doing to help you. May I refer first of all to our ligislative pragram.

The Basic Science law you have heard much of. It is very simple when analyzed. It means that any one desiring to practice the healing art in Georgia should pass examinations on the Basic Sciences, which are anatomy, chemistry, physics, physlogy and pathology. Surely no right minded man, be he layman or professional man can raise any objection to this. It seems, however, there is some opposition. There is some propaganda against it. I would therefore urge that the membership of this society approach the senators and representatives of their respective counties and urge their support of this important measure. Do this without delay. The next session of the legislature is approaching.

The Health Program of the State Board of Health is heartily endorsed by the Medical Association of Georgia. The necessity for larger funds to combat the present health sitution in Georgia is imperative. The physical business and economic welfare of our people and our state are dependent upon the control or disease. Malarial fever and hook worm are again on the increase and recent storms, floods, and tornadoes have made harder the conditions of control. The Sanitarium facilities for the care of mental defectives and tubercular cases are painfully inadequate, the preventable disease control situation is in dire need of greater physical and financial help, and I shall avail myself of this opportunity of urging all district societies to keep alive the effort of tick control in each of its counties. We know that Tularaemia or rabbit fever has reached us from the west and is rapidly spreading over the entire South. The ticks which bite animals are the main cause of the spreading of this disease. It has recently developed that not only the rodent type of animal is subject to tularaemia but also sheep, bitten by ticks have developed the disease. Hence tick eradication is important.

The Department of Health of our state will ask for a substantial increase in its appropriations and we must work to see that these appropriations are obtained. Unless good sanitary and health conditions prevail in our state, man suffers, mentally, physically and financially. We now raise weaklings who are incapable of carrying on the battle of life and fall in the struggle in competition with the foreign invaders whose physical condition is probably better than that of the natives. It is time to take heed when we hear

*President's address before the Twelfth District Medical Society, Dublin, Georgia, June 13, 1929.

that malarial fever has increased 81 per cent in our state.

Along the line of preventive medicine I would ask you to note that the chairman of the Cancer Commission whom your President recently appointed has caught step with the spirit of this administration and has begun his cancer campaign by personally presenting a paper on cancer. I think it advisable and good policy for your society to repeatedly warn your citizens of the prevalence of cancer, its increase and its prevention in so far as we can.

The Woman's Auxiliary is the auxiliary to the Medical Association of Georgia. It appeared to me that many other organizations were endeavoring to adopt them, in such a manner as to use them without giving them credit for their splendid services. It occurred to me that it was high time for the Medical Association of Georgia to let them know they belonged to us. This your president did in what he hopes was a very effective manner and one which would give due credit to the efforts, labor and accomplishments of these worthy women.

A few years ago the American Medical Association adopted a recommendation of its committee that its component organizations organize for Medical Relief in Disaster. The plan of organization was for the President of the Association of each state to be at the head of the State organization. In counties the President of the County Society would head the organization. If several Societies are combined into one Society the President of this combined Society would be the director in these counties. The state director would be the President of the Medical Association of the State and the national director would be the manager or secretary of the American Medical Association acting under the advice of the President. The work that this organization would do would be immediate relief in disaster. Just as soon as possible after a great calamity has befallen a community the organized band of physicians of your county, at the request of your President manager, would go without delay to the scene of trouble and function until the Red Cross, the United States Government or some organized bodies for this purpose arrive to take charge. At this time your services will cease unless necessity demands that you remain under the directions of the organized body taking charge. There should be several central stations in each county where emergency equipment is kept in readiness. This work is now done in a disorganized way in many communities and we want it organized and your County Society to have the credit for the splendid forethought. It should be done with such grace and promptness that it will become a happy tradition in your community. I trust that this element of the program of our work will be given to the press and given the publicity and credit it deserves.

Your president requests that you organize promptly and after organizing effectively notify him that it has been done.

At the Macon convention of our Association a great problem of vital interest to you presented itself. The expenses of the Association which has been kept at a minimum for a number of years were found to exceed the income by a considerable amount. This condition had existed for several years. The governing bodies saw no way whereby these expenses could be reduced in any amount without great detriment to the Association. The problem presented itself in this rather clean cut form. Eliminate Medical Defense and retain the $5.00 per year's dues or continue Medical Defense and raise the dues only sufficient to take care of the essential needs of the Association. There was much talk and discussion given to this weighty subject. If we should sacrifice Medical Defense we felt that the physicians, particularly throughout the country districts, would not protect themselves with other insurance which would undoubtedly in some instances bring about unfortunate suits which in turn would reflect on the profession of this State. Therefore it was agreed to retain Medical Defense. It was then necessary that the dues should be increased. After a generous exchange of ideas the House of Delegates referred this matter to Council which decided that $7.00 per year should be the minimum dues. The House of Delegates approved this and the convention of the Association adopted it. This increase is a very small matter indeed, being about a 1-2 a cent a day and you are to be congrat-

ulated at having such an efficient executive body that they can give you so much at such a nominal expense. The dues of this Association are the lowest of any Association in the United States giving Medical Defense.

What do we get out of our State Association and Organized Medicine?

We receive the benefits of the legislative program promulgated by it. The splendid work of the Department of Public Health of the State in which it cooperates, aids us materially in our efforts to help humanity. It is working industriously to establish hospital facilities in every county or group of counties and to improve those already established. It carries Medical Defense protecting its membership and paying expenses in case of suit. It is lending support to the splendid efforts of the Woman's Auxiliary in its development of an educational fund for the medical education of Georgia boys in medicine. It gives you a Medical Journal of real scientific worth. Through its Medical Relief in Disaster it presents an opportunity for you to aid the unfortunate. It offers rare opportunities to its membership in the Crawford W. Long Memorial Prize contest and in the Abner Welborn Calhoun Lectureship. It affords opportunities for you to meet your fellow man in medicine and to discuss in an informal way matters of medical import. Many more are the objectives of this Association by which you are benefited but these few should illustrate its value to you.

To you, members of the 12th District Medical Society and, especially to those of Laurens County Medical Society, and of the host city, Dublin, it is very gratifying to the officers and other invited guests who are here today to observe your splendid interest, evidenced by the presence of so many representative members of the Association in response to your invitations. You have held a splendid and instructive scientific session and you have been most hospitable and kind to all of us who are visiting you. The 12th District has an enviable record in the past. It is fully maintaining it now and we feel assured that its support of, and loyalty to, the State Association will always be such as to reflect credit upon itself and honor upon the Medical Association of Georgia.

AMERICAN MEDICINE AND YOUNG GRADUATES*

STUART GRAVE, M.D.†
Tuscaloosa, Ala.

Mr. Chancellor, Members of the Faculty and Graduates, Ladies and Gentlemen:

An occasion of this kind is always an inspiration. As the years roll on at ever increasing speed it is always a joy to look upon these annual classes of new recruits who are about to consecrate their lives to the greatest problem of mankind—a problem as old as the ages, the problem of the conservation of the health of the people and the cure of disease. There is no other problem which is at once more challenging to man, no other problem in our complex modern life which presents a greater demand for an exact scientific solution.

It is a problem whose solution has engaged some of the keenest intellects, and many of the most devoted men and women in the history of the human race.

Emerging from the dim shadows of the past ages, surrounded by mysticism and superstition, medicine has gradually, through the centuries, shaken itself loose from these handicaps—until today its future, based upon pure science, promises longer life, better physical development, keener intellectual attainments and higher ethical standards than ever before. Its advances in the last century have been marvelous beyond belief. And it is fortunate for us that modern medicine has made these wonderful advances because the unparallelled improvement and application of machine power might prove itself destructive if our minds and our bodies were not made stronger to keep the mastery of nature's forces. With the building of great factories, foundries and machine shops, it is highly essential that every political subdivision of this nation make equally as great efforts to build schools and colleges and teaching hospitals and boards of health, free from any selfish political influence. The people can safely entrust the conduct of

*Commencement address before the Medical Department of the University of Georgia, Augusta, Ga., June 3, 1929.

†Dean, Medical Department of the University of Alabama, Tuscaloosa, Ala.

these institutions to the tried leaders in their organization. The character of men is known to their fellow men and the public in matters of education and health, for their own protection, must see to it that these institutions and their faculties are given strong moral and financial support.

American medicine today is on a plane which is attracting the attention of the world. In the boyhood and girlhood of your fathers and mothers here tonight, American medical education and practice were in such relative positions, as compared with medical education and practice in England, Germany and France, that the best physicians and surgeons in America felt that their education was not complete until they had studied in Europe. Today that student stream across the Atlantic has reversed, and now not only physicians but governmental commissions are coming from all parts of the world to study the great university medical schools and hospitals, the great post graduate research institutions, the fine public health organizations, which have been developed in this country.

It may be interesting to this audience to review for a moment the history of medical education in this country. Perhaps some of you are familiar with it in a general way. Suffice it to say that, paying due credit for its good features and rendering all honor to the great teachers of the past, who stood out like beacon lights in the darkness of the ignorance of a comparatively new country, American medical education was at a low level as compared with medical education in Europe when Mr. Abram Flexner's report to the Carnegie Foundation in 1910 turned the pitiless light of publicity upon prevailing conditions. It is to the everlasting credit of the American medical profession that they took up in earnest the task of improving conditions within their own range. Under the influence of the American Medical Association and the American Assciation of Medical Colleges, backed by the authority of the Association of State Boards of Licensure and by the moral and financial support of a group of far-seeing and public spirited laymen, medical education and medical practice have been revolutionized in a quarter of a century. There has been greater actual progress in this field for the good of the people than before during all the years since the Great Teacher brought the leaven of the responsibility of human brotherhood to enliven the pagan philosophies of the Ancients.

There is not time to trace all this development, but a few statistics tell the story. There have been in America altogether 447 medical schools. Today there survive only 80, less than 18 per cent of that total. And of these 80, only 73 now measure up to the standards of the American Medical Association and its allied standardizing agencies and are ranked as Class A, without which rating their diplomas do not entitle their holders to take licensure examinations before the National Board or most State Boards. Through all this heart-breaking struggle the present medical schools of the South have carried on amid most discouraging conditions. With little public support, with pitifully small budgets, assailed at times by selfish politicians, the survivors in this humane service have certainly earned their reward. And I want to appeal to you people tonight to reward properly this institution which is more than a century old. It has the background, it has the correct organization, it has the vision of the future, it has the personnel and the ideals, to make it a great medical school. No institution needs support more. None deserves it better. Across this Southern tier of states it is just as essential to have a string of strong medical schools as it is to build good roads or to develop the great natural resources of the South. The future of American Medicine lies largely in the schools which are integral parts of the State Universities. The Medical Department of the University of Georgia is one of those schools which logically should be developed into one of the fine state institutions which will eventually grace those commonwealths which are grouped about the Gulf.

Your local campaign for funds should be generously supported. Outside Augusta friends have contributed loyally. The amount asked for here is pitifully small. The people of Augusta ought to be giving a million instead of ONE hundred thousand. I wonder if you realize what this means to your beau-

tiful city and to your great state? It is said that the Lord helps them who help themselves sometimes; and so do State legislatures and educational foundations. No person here has mentioned this matter to me, but I am deeply interested in medical education, particularly in the South, because it means so much to our people. And I want to appeal again to the citizens of Augusta to give until it hurts, the next five days, and *then* to start raising a million for expansion during the next five years.

And now a few words to these young doctors and nurses. I want to talk to you a short time about your responsibility. All you have tonight has come to you in large measure through the toil, the tears and the sacrifice of those who have gone before, and your responsibility is correspondingly heavy. You have reached that goal for which each of you has been striving with more or less energy for several years, and it may seem to many of you that your labor is largely finished. Please do not misunderstand my appreciation of your efforts. No one knows better how hard the medical curriculum is, but no one knows better also how few put forth their best efforts. Inheritance gives some advantage to a few, but in the rank and file the difference between the man who wins honors and the man who just *gets by* is only a matter of about 15 per cent of effort. You have really just begun. And I want to urge all of you who have not read that splendid collection of essays by Sir William Osler, published under the title of "Aequinimitas," to read that essay entitled "The Master Word." Osler's master word was WORK.

For many of you this happy occasion, which marks the consummation of the greatest effort of your lives so far, is in reality a crisis, because, all too often in the usual course of events, it marks the beginning of a relaxation from effort which is likely to become permanent. To urge you to strive against that danger and to help you to do so is my privilege tonight.

It is going to require greater will power than you have ever exercised before to keep from falling into habits of mental and physical slothfulness which will eventually submerge you in the great ocean of mediocrity, whereas, steadily continued effort will lead you eventually to the mountain peaks of accomplishment and happiness. Tonight as never before, you have need for strength of will.

There is no quality, which reviewed in retrospect later in life, seems more valuable than this, and we can well devote some time and thought to the problem of how each of us can strengthen his will. This is a problem not often considered in the curriculum of school or college, and yet it is one of the most important for all young people. The neglect of the will in relative measure is universal, so the psychologists tell us. It is a common human failing. The weakness of our will, which shows itself in our distaste for persistent effort, is the one cause of almost all our failures. Our passiveness, our thoughtlessness, our dissipation of energy, are only so many names to designate the depth of our universal laziness. Among uncivilized races, travelers tell us, there is an absolute incapacity for all perserving effort. And yet all happiness presupposes some effort. In all our studies, have you ever given attention to that most important thing, the education of the will? Is not the energy of the will the most powerful factor in every great or noble thing that men accomplish? Is not the government of self the real science of all sciences?

The college curriculum usually ignores the will, and yet the greatest thing that any young man can learn is to overcome the natural sluggishness of his mind. Are we not relegated to hopeless mediocrity if we are incapable of that power of perserving effort, without which we cannot hope to rise above the intellectual poverty of the majority of men?

Roger Bacon in his great "Opus Major" emphasized *reflection* and *experiment*. Herbert Spencer laid stress upon an *open mind* and *deferred judgment*. As students we have been required to amass a certain amount of information. We have been subjected to a certain sort of encyclopedic training. But, to become really wise and happy, we must learn how to create thought and how to appreciate the realities of life. We are weighed down with a mass of information and a life of

kaleidoscopic change. We must learn to choose that worth while. Tranquility is required before our solution of information will crystallize into thoughts of regular beauty.

Real effort needs to be defined. Moderate, but continuous, effort alone expresses real and fruitful energy. All work deviating from this type is lazy, superficial work. It goes without saying, that continued work implies continuity of direction. Some people deceive themselves in this regard. They are *continually* busy, but they get nowhere. They have what a famous psychologist has called "buzzing minds." The great disadvantage in scattering one's efforts is due to the fact that no impression has time enough to become permanent. It is one thing to bring forth a creative thought and another to store in one's memory that which others have done. Great quantity of work is often prejudical to its quality. There is all the difference in the world between euridition and creative thought.

How shall we strengthen our will to bring forth the best there is in us? Unquestionably one of the best ways by which we may educate our will and cultivate our self control is by courageously setting for ourselves, Spartan-like, some daily task that is difficult. And our strenuous, persevering efforts must not be of the undisciplined, wandering type, but must be directed toward a fixed goal. Newton discovered the law of gravitation "by constantly thinking about it." The son of Charles Darwin writes: "My father had the ability to keep a subject in mind for a great number of years without ever losing sight of it." The aim to pursue, then, is *truth* with meditation, concentration and perseverance.

Well regulated activity is the spring from which arises our deepest happiness. The desire for improvement, however, feeble it may be, can be developed, strengthened and transformed into a strong and lasting resolution. The young man of vacillating inclinations may strengthen himself in the desire to work until his desire is transformed, first into firm, ardent, lasting resolution, and finally into invincible habit.

Another method of stimulating our will is the guidance of our emotions. Spencer maintains that the world is led by emotions. It is a mistake to feel that emotions are disgraceful. It is the loss of control over our emotions which is disgraceful, and we should teach ourselves to strengthen our will by guiding our emotions. The elements of our inner life fall into three groups: Our ideas, our emotional states, our actions. Our ideas may be separated into two classes: Those from without and those from within. These ideas can be controlled, but they alone have little strength in our struggle against laziness and sensuality. On the other hand, our emotions cannot be altogether controlled, but they can be guided to have vast influence upon our will. The will to maintain long sustained effort must be prompted largely by sentiment. Love of family or profession, pride in achievement, vanity of personal accomplishment, cupidity of financial gain, selfish desire for power, sympathy, anger, fear, revenge, hope, patriotism, all these have unlimited power over the will. They may distort our perceptions into hallucinations and even make us face death. These emotions cannot be suppressed, but they can be controlled and turned to our advantage by cultivation in the right direction.

In undertaking the conquest of self it is of utmost importance to form strong bonds of habit between ideas and conduct, bonds that will unite them so absolutely that whenever an idea becomes into the mind the action will follow with the precision and vigor of a reflex. This can be accomplished through the building of associations of ideas. About a bad habit we can paint a disagreeable picture which will cause us to shun it the moment the idea comes into our minds. About a good habit we can build an association of pleasant ideas which makes that habit easy. The joy of work well done! The satisfaction of mastery! The pride in achievement! The emulation of one's friends! Reflection on such pictures brings home to us how much worthwhile a good habit is.

Again within ourselves let us look to three great factors which take part in our effort to strengthen our will. The first and of greatest importance, is meditative reflection. This does not mean day dreaming, but

that calm consideration of our knowledge which leads to *action;* that crystallization of ideas which does not stock the mind with facts, but makes it glow with creative energy; those periods which tend, as Montaigne has said, "to *forge* the mind, not to furnish it." One must try to keep *in mind* certain reflections which will help oneself to make oneself *love work* and to detest an easy, useless, stupid, idle life. Work brings joy; the intense satisfaction of self esteem; the living exultation of feeling one's own faculties grow strong and keen; the delight of showering happiness upon one's loved ones and of preparing oneself for a happy old age. Let one's thought become impregnated, as it were, with the perfume of these associated ideas, and it is impossible to have one's will stimulated by a strong but quiet enthusiasm.

Into such associations of ideas it is helpful to draw the lives and writings of great men. To this end the study of history and philosophy and literature are invaluable. Make yourselves familiar with the great minds of the ages. *Live* in *their* thoughts. Three times a year take a week's vacation to reflect and resolve. Each morning take five minutes to reflect and to plan the day's work. Each day set a task and do it well. A distinctly formulated resolution, resolutely followed, strengthens the will and gives confidence. And remember that the dominating law of psychology is the law of habit. Avoid sentimental day dreams and sensuality. *Man hood* lies only in the *mastery* of self. Mental work is the sovereign remedy. Laziness is the mother of vice. When temptation comes, counteract it with hard work. Regular and methodical work alone can bring to mind that powerful interest that will continue. Avoid the careless, idle rich; the weak, envious pessimist; the lazy, fatalistic companion. Keep the mind free of unessential impressions and thoughts. Think constantly about great questions. Rejoice in the joy of work! Exult in the strength of manhood!

My friends, it has been a great pleasure to be with you tonight. At fifty, we envy you at twenty. The human mind has accomplished more in the last three generations than in the previous three thousand years. It is not beyond the bounds of reason to believe that you young graduates will live to see even greater things accomplished before you reach the maturity of life. The developments of science make one dizzy. The advances of true religion are equally as encouraging. In science and religion we can better understand the teachings of the divine law. Never will there be any conflict between *true* science and *true* religion if we maintain open minds and honest hearts and seek continually after *truth.*

Out into this great future you are about to go. Bear ever high the torch! As the years creep on, may you feel with Osler, that "to have striven, to have made an effort, to have been true to certain ideals—this alone, is worth the struggle."

Bearing in mind, then, our master word, WORK, may you take as your guiding principle those lines from Macbeth which Osler confessed gave him the guiding principle of his life:

"The flighty purpose never is overtook
Unless the deed go with it: from this moment
The very firstling of my heart shall be
The firstlings of my hand."

DEVELOPING THE STATE OF WELL-BEING*

O. W. BETHEA, M.D.†
New Orleans, La.

One of the fundamental purposes for which this country was founded was to secure for every individual "Life, liberty and the pursuit of happiness"—yet without a reasonable state of well-being life may become a burden, liberty the veriest travesty and the pursuit of happiness take rank with the storied odysseys of Ponce de Leon and Billy Patterson.

The world has changed much even in the memories of the youngest of us. Prophylaxis has reduced the incidence of disease; specifics and near-specifics have shortened the duration of disability; and science has so lessened

*Address before the annual banquet of the Alumni Association of the School of Medicine of Emory University, Biltmore Hotel, Atlanta, Ga., June 7, 1929.

†Professor of Clinical Medicine, Tulane University of Louisiana School of Medicine, New Orleans, La.

mortality that people are no longer satisfied with merely being alive or even reasonably active but demand a full measure of health and happiness. Changes have taken place that affect other fields of endeavor and those concerned have usually risen to meet the requirements. We see the one-time blacksmith now mending tires and the old livery stable converted into a modern garage, yet many of us are still figuratively sitting out in front of our old places of business trying to rent out horses and buggies—Are we keeping step with the march of progress? The dentist has put across periodic examinations of teeth and dental prophylaxis—we are still waiting to answer the call of the sick.

There is an old saying in commerce that a slot machine can dispense the article called for but that it takes a salesman to anticipate the needs, interpret the desires and develop the latent wishes of a customer. I sometimes feel that many of us have acquired the slot machine habit and dole out the services demanded, instead of availing ourselves of our larger possibilities for usefulness. It is not our duty as well as our privilege to endeavor seriously to develop and maintain the highest possible state of well-being in every individual who looks to us for health guidance. Yet look around you and note the proportion of the physically unfit; estimate the percentage of perfection in the next hundred persons you meet: ask yourself the question—"Are we as a profession meeting the full measure of our obligations"—then weep.

In this discussion we are referring particularly to under-weight, weak, easily tired, nervously unstable, faultily developed individuals. I believe that most of these living today reflect discredit on our profession at large or on some one or more of us in particular. We cannot hope to entirely eliminate this type. We cannot altogether control the public mind. We must allow for the stupid and the obstinate but each of us can reach most of the needy ones in our own groups and as opportunity presents make the individual acquainted with his or her possibilities that the privilege of a better state of well-being may be elective and the responsibility rest not upon us.

Judgment, tact and unswerving devotion to ethics are essential, but my plea is that we should not minimize our unescapable duty of some way answering the full requirements of those who entrust their welfare into our keeping. Perhaps I can explain better by an illustration. As a young physician I was called to see a woman suffering from an acute impaction. She was promptly and easily relieved of the condition for which my services had been solicited, and I was given to understand that I had been selected as the family physician in place of their former adviser who had retired. Both the patient and her husband seemed underweight, anemic, nervously unstable and generally below par. Should I have quietly gone out, climbed into my car, lit a cigarette and gone home or should I have tried to meet the evident requirements of that household? Right or wrong, I chose the latter. In the course of a friendly chat I asked the wife if she usually felt well and strong. She replied that she was so weak that she usually had to rest once or twice coming up the stairs. By a few simple questions I learned that she was nervous, slept poorly, suffered from indigestion—the whole pitiful story with which we are all so familiar. The husband was little, if any, better. I suggested that if they cared to have the matter investigated and would come for an examination I would see what could be done. Was that an indiscretion—a deflection from ethics or was it fulfilling an obvious obligation?

By a carefully planned regime of diet, exercise, recreation and correct living generally, this couple was brought up to a splendid normal. There is another side of this story—with due apologies. When the task was finished, I faced the problem of sending a statement for services. I had charged the usual rate for office consultations and visits which seemed to total large and with the timidity of a young doctor I feared to send the statement—most of you can remember some such early experience. Finally one night in a reckless spirit of desperation, I reasoned that I had rendered a special service so doubled the account as it stood and sent a bill. They promptly doubled it again and sent a check.

There are many factors interfering with well-being that are sometimes not given suf-

ficient weight in our considerations. Among these are starvation and faulty habits of living.

Starvation may be intentional, accidental, or unavoidable.

Fashion takes its annual toll. The country is swept by periodic waves dictating the willowy, wispy figure for women. When I was a medical student here, nearly thirty years ago, we were in the throes of one resembling that of recent times. I remember hearing our good old Dr. Hardin rail against it. At the conclusion of an impassioned denouncement, a twinkle of humor came into his kindly eye as he said, "When I work hard all day and go home tired at night, I want to be able to rest my weary head against a shoulder that wont hurt."

Kipling described one of his heroines as "A rag, a bone and a hank of hair." Modern fashion has gone even further by abbreviating the rag and bobbing the hair.

I recall more than one case where anxious parents have brought under-nourished daughters for treatment and, after long and faithful effort, I have learned that the patient was surreptitiously defeating all of our plans.

I once heard an old physician, in giving the results of his life experience, say, "In treating the respectable poor always consider starvation as a possible cause for symptoms." They often keep up a brave exterior at the expense of the interior. The dining room suffers that the parlor may flourish. A job for the husband may be worth many times a prescription for the wife.

A church recently sent me a wreck of humanity for treatment at the Baptist Hospital. Our only finding of importance was that in a political upheaval her husband had lost his good position. They had lived in a good home, had a vegetable garden, poultry, cows and many of the comforts of life. Since the loss of his position, they had moved three times in two years, were trying to live on about one third of their accustomed income and the wife and mother, while keeping the others reasonably respectable and comfortable, was simply starving herself.

I remember a young boy who had actually lost weight for three years. I visited the home once at meal-time. He had before him a glass of iced tea, a sliced tomato with vinegar dressing, some chow-chow, soda crackers, and a bottle of catsup.

There is that great host, composed particularly of men who eat enough but not properly. We remember that old minstrel man who claimed that nature had made mistakes, and gave as an illustration that our mouths were not in the right place—that if they had been put on top of our heads that the busy man could put his breakfast in his hat and chew it properly as he rushed to his office, thereby avoiding an early death from indigestion.

We often find habit or environment incompatable with the best of well-being. Such cases come to mind as that of a medical student who was attending a full course of lectures during the day and holding an eight-hour job at night as a telegraph operator.

The vicissitudes incident to the pursuit of pleasure must not be ignored. My two boys mope around, yawning and stretching well into the night; and when I finally burst out with "For the love of the Prophet, why don't you savages go to bed?" I get the reply, "Can't do it, Dad, we're waiting for the time to go to a dance." I hope to live to see that good day—or rather that good night—when social affairs will begin at eight and close at ten.

In assuming the management of one of these patients, it should be recognized in the beginning that a prolonged period of observation may be necessary, and that results can be obtained only with the aid of a sufficient amount of cooperation on the part of all concerned.

There is probably no case that requires a more thorough preliminary investigation. It must include the family tendencies, the past history of the individual, his or her present habits, and a true understanding of the patients physical and mental status.

The history should include a record of the family tendencies not only as to disease, but as to physical peculiarities, such as underweight or over-weight, and mental or nervous characteristics. It should include a careful study of the habits of the individual, particularly those that might be a direct factor in producing his present condition. The

patient's environment must be investigated particularly as to whether or not he may be able to lend himself to the measures that may be found necessary, such as rest and recreation. We must consider the matter of temperament and disposition. We cannot treat any two alike. Practically every husband, if given the chance, will tell you that his wife is nervous. Almost any wife will assure you that her husband is hard-headed—"Doctor, he's the hard-headedest man you ever saw—you just can't imagine it all." The usual data looking toward determining past or present disease should have careful attention.

The investigation should include a general physical examination and all necessary laboratory work. Not only must we know if there be any disease or organic defect interfering with the well-being of the patient, but also have an understanding of his functional status. Special examinations, x-ray studies, basal metabolism determinations, etc., should be carried out as indicated.

When all data have been collected and studied, it is my usual custom to have a talk with the patient or those most concerned, and at this time to give my opinion as to the possibilities and probabilities that obtain, as to how long a period of supervision will probably be necessary; and give any other information that may seem advisable.

Treatment may be briefly outlined as follows:

Any disease found, such as malaria, syphilis, or parasitic infestation must be cured. Physical defects, such as impaired chewing facilities, enlarged adenoids, diseased tonsils, or defective feet must receive attention. Faulty habits, such as the use of alcohol, the excessive use of tobacco or coffe, and improper eating, must be corrected.

It is necessary to establish the proper balance between rest, recreation and work. The amount of each of these will of course, depend upon the many circumstances that may have to be considered, such as the age of the patient, his state of nutrition, and the objective sought.

Sufficient sleep is essential. Usually about seven to eight hours will meet the requirements. It is often necessary to revolutionize the affairs of a household in order to give the patient an opportunity to secure this. For example, a mother may be exhausted from nursing a baby a large part of the night. The baby may be weaned and made to sleep alone. The household may be noisy, the bedroom may be improperly ventilated. Particularly in the case of children, two or more may be sleeping in the same bed and the restless one keep the others awake. We are all creatures of habit, and this applies to nothing more directly than it does to sleep. The patient should have a definite sleep-time and adhere to it, and a regular time for getting up in the morning.

Exercise is invaluable. It builds up muscle, removes unnecessary fat, should such be present, and promotes the proper function of the various organs and structures of the body. I remember one young lady who came to my office apparently prepared for battle. She said "Doctor, you are giving me exercise to increase my weight and I met today a young woman for whom you are prescribing the same routine to reduce her weight—where are you?" I explained that I was giving her acquaintance exercise that would build muscle but would use up fat even faster so that loss of weight would result—whereas in her case there was no superfluous fat to be used up, so that good normal tissue development would necessarily result.

Just analyze the word "recreation" and you will have an idea of what really can be done, the patient often may be recreated. One physical director in emphasizing the value of proper exercise says that it makes one "more live-with-able." I remember one young matron who came to my office at the end of a period of treatment and stated that her husband wanted a statement of account, and with some embarrassment added "And he sent you another message." "What is it?" "I won't tell you!" After much persuasion, she finally informed me that friend husband had sent me word that I could add to his bill anything that I saw fit for the improvement in her disposition. Much can often be accomplished by changing the type of work done. For instance, a man with a desk job may, for a time at least, take up something more active.

Of the various forms of exercise that have

been proven of value, the regular setting-up exercises are most uniformly satisfactory. I believe that the Manual of Physical Training of the United States Army is correct in saying that no system has ever been found comparable to setting-up exercises for the development of the human body. This manual may be secured for the sum of fifty cents from the Superintendent of Documents, Washington, D. C. The average individual may take from fifteen to thirty minutes exercise of this type per day. It is often of advantage for a household to have several members go through the same routine, as there is the stimulus of competition and example. Most children now in the public schools are taught these exercises, at least in part, and there are several million men who were thoroughly trained in them during the World War. This calls to mind the incident of the rookies who were being put through their physical exercises and had reached the point where they were lying on their backs and working their legs is circles "Riding the bicycle," it was called. One fellow was seen to stop. "Hey, you," yelled the sergeant. "I thought I told you to ride the bicycle!" "I am, sergeant, I am just coasting now." A form of exercise that is very acceptable to many is that to the exercise-to-music records for the phonograph. Some of these are exceedingly good, others are rather unbalanced. Wherever possible every young person should be connected with some gymnasium, and even men and women up to the age of fifty usually can do this work to advantage, if properly supervised.

Walking is within the reach of everyone, and there are few efforts at development that meet with greater success. The average person may walk from two to five miles per day to advantage. All exercise, even walking, must be supervised. I once told a stout lady that she must walk more. She had not taken any appreciable exercise for many years, but the next day she started out after lunch, in the middle of a hot August day, and had covered ninety blocks when she was picked up prostrated and brought home by a passing motorist. She spent several weeks in bed. It is highly desirable that the feet be in good condition, that the patient wear comfortable shoes, be comfortably clothed, and select pleasant surroundings where the psychic effect of attractive scenery may be added to the muscular movement.

Golf, tennis, horseback riding, swimming, fishing, hunting, or any form of exercise that puts the muscles into use, changes the mental processes, and intrigues the interest, will be of advantage. Speaking of golf reminds me of a recent incident that occurred in my city. Three ladies met on a golf course and one of them after having missed the ball several times threw down her stick and exclaimed, "I just hate this foolish game!" The second player said that she did too, and the same sentiment was voiced by the third. "Then why do you play it?" one asked. 'My doctor makes me,' was the reply. "So does mine." "Mine, too." "Who is your physician?" one asked. "Dr. Bethea," replied the first. "Dr. Bethea, Dr. Bethea," chimed the other two. May I give another illustration. I told one man to take up outdoor exercise and he selected hunting. I pictured him walking miles behind a pair of Gordon Setters but I learned later that he had rented a duck blind that could be reached by an auto, that he would get in his sedan, have the chauffeur drive him down to the blind and then retire out of sight, would signal for the car to come down after him when ready, simply step in, and ride home.

Remember that we are discussing those patients who are under-developed, particularly from a nutrition standpoint. Naturally, therefore, it is by proper diet that we obtain the largest measure of results. It may be necessary to improve the patient's digestion by the use of hydrochloric acid or some other agent. It may sometimes be advisable to give simple bitter tonics for a time. Under all circumstances the chewing facilities should be good and the patient's mouth free of tender areas. The individual must be taught how to eat—that is to eat slowly, chew the food thoroughly, and keep the mind in a pleasant state of comfortable relaxation during the meal period. If I were required to limit myself to one motto for each group of patients, I would select for men, "Eat more slowly;" for women, "More rest indoors, more recreation outdoors." Very often the patient's mind must be disabused of fads to

which he has become a victim. A certain amount of suggestion is often desirable. The patient must have regular meal hours and adhere to them and, if food is taken between meals, it should be at certain definite intervals. It is always advisable to get in touch with those having such matters in charge and see to it that the meals are daintily served; that the table is made attractive; that the room is properly heated in cold weather, properly venilated, and in every way comfortable. It may often be advisable to exclude articles of food that are not harmful in themselves, but that take up the space that should be available for more desirable material.

Milk is usually the mainstay in these cases. It may be given plain with meals or between meals; or in the form of milkshakes; or buttermilk with cream added. It may be advisable to change from one of these to another from time to time. The average patient may take to advantage from three to six pints per day. I always insist upon fresh morning's milk. To the milk may be added other foods that are sufficiently nutritious in character.

It is usually best to give the patient a definite list of the articles of food that he may eat at the three meals, and specify what may be taken at the interval feedings, if any.

In this way undesirable articles are excluded. No matter what our precautions we will sometimes fail to convey our wishes. I had heard of such things happening, but one patient really came to my office with her diet list and exclaimed, "Doctor, I am so sorry, but I find that I simply can't eat all of this and have any room for my regular food." When the case has progressed sufficiently, the individual may be given a list only of what is to be avoided. This list will include such items as may be harmful in themselves by interfering with appetite or digestion, or that may take the place that should be devoted to more nutritious articles of diet. The patient should be weighed in the physician's office at least once each week. When one has gained the desired amount in weight, further deposit of fat may be prevented by increasing the exercise or reducing the diet, or both. There is nothing more encouraging to the under-nourished patient than a continued increase in weight toward a desired goal, and discouragement is almost impossible when the scales are telling a continued, cheerful story. When we have taken a frail, under-nourished, weak, uncomfortable individual and brought him or her up to a high standard of happy, efficient, strong and wholesome manhood or womanhood, we have really accomplished something that should increase our own self-respect, and, in most cases, will increase the respect of the community for us.

Let us keep before those entrusted to us the ideal that they should so live that, when the genial warmth of the summer of life gives way to the chill of winter frosts, "They may like ripe fruit drop into the lap of Mother Earth or be gently gathered—not harshly plucked—in death, mature."

SOME HOMELY TRUTHS ABOUT THE HEART*

W. W. JARRELL, M. D.
Thomasville

In this discussion it will be our purpose to confine ourselves to the truth, though time will not permit the whole truth, we shall endeavor to speak nothing but the truth. As little as possible will be said about the anatomical details of the heart, but the physiologically different right and left hearts and the difference of their two functions are of paramount importance and will form the theme of this discourse.

Whatever has been written about the dynamics of the heart muscle applies to both of these hearts alike. The division of its contraction into the isometric and the isotonic type is common to both. In the isometric type there is an increased tension with out any dimunition of the muscles length. However in the isotonic type there is a shortening of the already tense muscle fibres. To visualize these types consider a runner set for the signal, weight resting on toes and fingers, center of gravity well forward, muscles tense with expectancy. This is the isometric type of contraction. With the firing of the pistol, he springs forward into the

*Read before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

activity of the race. This is the counterpart of the isotonic type.

The similarity of the two hearts that is apparent dynamically is not found in an anatomical, physiological or functional study of their corresponding parts. Though they are inclosed in a common sack, though they are separated by a septum only, they vary markedly in the essential features. However to speak of the two hearts as one would speak of the two kidneys would be misleading for the kidneys are anatomically separate while the two hearts form one viscus.

The character of the output of the two kidneys is identical. The blood handled by the two hearts varies essentially. There is a difference in the thickness of the walls and in auricular capacity of the two hearts. It is only in the ventricular capacity that they are identical. There is an anomalous situation in regard to these two hearts, though they beat synchronously, though they get their impulse from the same sino-auricular node, though their ventricular cavities have the same capacity, the output from the two will vary throughout the day and it is only the totals that will be equal. Does not this give basis for the hypothesis that the two hearts are autonomous at least in part. Each like the soldier of a squad has the faculty of lengthening its pace, shortening its pace, closing to the right or aligning to the left, even though both get their commands from a common origin. This being true then is it not possible for either of these hearts to show variations from the normal without influencing the other until there is a complete demoralization of the cardiac activity and function like unto the routing of a squad in the above figure.

Though they consist alike of an auricle and a ventricle, their Auricular-ventricular valves vary in that the right has three cusps whereas the left has only two. And further whereas the ventricles seem to have the same capacity the auricles vary in that the left is larger than the right. Considering the predominance of the physical task of the left heart it is not unexpected that its walls should be considerably thicker than those of the right heart. Each side of the cardiac septum receives its nerves from the same superficial and deep cardiac plexuses, however the sino-auricular node which determines the rythmic beating of the heart is found in the right auricle, there being no counterpart in the left auricle, thus we have the node in the right determining the rate of both right and left heart beats.

Pathologists tell us that embrionic tissue is potentially cancerous yet this sino-auricular node is made up of spindle shaped or embrionic muscle cells richly supplied with nerves. This of course is only another feature of this anomalous organ. Physiologically speaking we find in the right auricle the firing mechanism which shoots both ventricles when they have received their charge of blood from their respective auricles, which in a way function as hoppers measuring and expeditiously delivering the proper load of blood to their respective ventricles.

The vascular way to the right auricle is long and by it moves the outgoing traffic of the vital organs while that to the left auricle is only so long as the pulmonary vein with its circumscribed field of service. The reverse is true in the ventricles. The pulmonary artery is short being confined to the lungs in its entirety. The aorta however is the way of life to the uttermost tissues of the body. Along that way to the right heart passes the blood current ladened with metabolic detritus for pulmonary elimination and also bearing the products of protein, fat and carbohydrate digestion to be passed unchanged through the lungs to the left heart for its final distribution to their respective body tissues. Would it be too fanciful if we referred to the right heart as forming the transportation unit for the sevice of supply whereas the left heart performed the same service for the advance or zone of activity, with the cardiac septum forming the zonal line between.

The right heart, with its vascular current ladened with a conglomerate mass of food stuffs on their way to the front; waste matter, products of katabolic metabolism, on its way to the chemical laboratory of the lungs

for elimination purification and oxygenation, is in marked contrast functionally with the left heart with its arterial burden of oxygenated, more or less purified blood, carrying its quartermaster's supplies to their ultimate destination for consumption.

Being as they were a more or less passive participant in the cycle of cardiac activity, the auricles play a secondary part in a failing heart. The ventricles play the important role and the effect of their failure is left in both a forward and backward direction, by a lessened thrust in the forward direction and by an increase of the volume in the preauricular vessels and contiguous organs. The twofold result is an arterial stasis and a venous engorgement. The end result of these two conditions are alike in kind and eventualy accentuate each other.

It is probably the accepted theory that the pathology in heart diseases always begins with the left heart and that the failure of the right side is in the nature of a secondary or complicating factor. Yet a dogmatic adherence to this theory would not be bourne out by the bedside experience of clinical medicine. Although it is very true that through the two short pulmonary trunks connecting the two hearts the backwash of a failing left ventricle overwhelms the feebler right auricle and ventricle. There is nothing subtle in this type of heart failure. Yet even in this type there is an appreciable long period of time in which the right heart is functionally competent and wherein one may get a definite impression of a failing function of the left heart. Here we have a tumultous beating, a trembling praecordium, an increasing rapidity of rythm even to the gallop, vigorously pulsating carotids and even the radials may show an increased effort—murmurs that may almost be felt as well as heard. This type is characterized by a valvular ascendency. The myocardial changes are secondary. It follows in the wake of an infectious condition. The sequence is infection of valves, endocardium and the muscle. It is rarely insidious and seldom is it mistaken for another condition. In legal parlance the evidence is always direct. It is more in the nature of a mechanical or dynamic breakdown. Here the picture is one of immediate rapidly increasing physical exhaustion with the heart gradually tiring to the cessation of physical effort and not an insidious slowly progressive condition marked by an increasing toxemia of all the vital organs, with the evidence against the heart often of an indirect or circumstantial nature. With the left heart the systemic blood supply is cut down in the failure of its function. With the right heart the blood supply is not diminished but poisoned by metabolic detritus. The right heart has no such dramatically direct symptomatology as the left. Dynamically the left heart is so preponderant that its vigorous cycle of activity will obscure the aural manifestations of distress in its weaker brother. In failure of the left heart the involvement is distinctively cardiac and the secondary systemic embarrasment is never sufficient to conceal the primary condition. With the right heart the picture is one of a general toxemia which the role played by the viscus itself is often secondary in symptomatology and is even obscured by the toxic manifestation of the engorged and dysfunctioning organs. Here the testimony of the brain, the stomach, the kidneys, and the liver and the other organs will be required to establish the disaffection of the heart.

It might appear that so closely are the two sides of the heart united anatomically that a differential diagnosis between their failures would be impossible, and that their respective functions so intimately allied would fail synchronously. Yet the variations in the two sides of the heart itself, the variations in their venous trunks, the variation in their arterial trees, the variation in the contents of the blood found in the two systems will logically carry a varying set of symptoms in their wake when the viscus fails. It is true that very often the manifest symptom complex seen in heart failure is a blending of these two trains of symptoms, but it does not preclude the possibility of there being a failure of one side of the heart without the symptomatic involvement of both. Further the vast difference between venous blood and arterial blood renders it

impossible for the stasis of clean arterial blood to produce the same effect. For instance a failure of the left heart may lead to an edema of the brain or mininges producing a weeping brain with its incident stupor but this would be in marked contrast with the psychoses or delirium due to venous toxines.

Now in the matter of the lungs, a man literally drowns in his own fluids when his left heart fails, but it is possible for a man to be in the articles of death with a right heart failure and yet have dry lungs so far as an edema is concerned.

Further in regards the lungs, the respiratory cycle if left heart failure becomes more rapid, shallower and incompetent, yet the rythm is not disturbed, whereas in right heart failure the Cheyn-Stokes respiration becomes the most painful feature. It is true that Cheyn-Stokes repiration is central in its origin but the central toxicity to which it is due in this impairment is cardiac in its origin and we are classing it as respiratory to contrast it with the respiratory cycle found in left heart incompetence.

In left heart failure the gastric efficiency remains unimpaired at least symptomatically. The difficulty with the patient is one of getting time enough from breathing to eat. When the food is consumed the digestive process gives rise to no dyspeptic symptoms. Such is not the case in a Portal engorgement such as you find in a failing right heart. The gastric distress more or less acute as the case may be, the indigestion that is incident to the above will stand in marked contrast with the absence of the same in left heart involvement. No small portion of the patients distress will be due to this gastric engorgement and the treatment of such as an indigestion will meet with little success be it dietetic or medicinal.

With the failure of the right heart the liver plays an important secondary role. In fact its engorgement and enlargement to the point of pulsation is mentioned as one of the very few classical symptoms of a right heart failure. Hepatic dysfunction and right hypochondriac distress may be present long before there is a sufficient failure to give an enlarged or pulsating liver. Look out for these torpid livers and dyspeptic cases in those beyond the meridian of life. The gall bladder itself may give all the subjective and many of the objective symptoms of stones where the pathology is merely that of a portal engorgement dependent on right heart incompetence. Such will not be the case in a purely left side involvement. In fact the incompetence may go far and the patient be in the very articles of death itself without any symptoms referable to this portal congestion.

So far as the pancreas and spleen are concerned there is no logical reason when they should not be effected even as the liver is but their manifestations are rarely so dramatic nor are they so well understood. Yet their participation in this portal involvement may be taken for granted. You do not find any evidence nor is there any logical reason for looking to them for any manifestation of left heart defection.

With the kidneys you do find a more or less prompt and a decided reaction when this venous congestion crowds upon them blood from a failing right heart. It may be a passive congestion with vague subjective symptoms of renal incompetence or it may be a profound reaction endangering life itself. Profound shock and myocardial weakening as in the case of right coronary thrombus will give you the symptoms of an almost lethal kidney impairment namely: suppression, in part at least, fixation of gravity, and the laboratory findings of an acute nephritis. This picture is not found when the left myocardium has tired to the point of dilatation and incompetence.

General edema is marked with left heart failure which grows progressively worse to a general anasarca unless he drowns in his pulmonary effusion. You may find a profound right heart prostration with attenuated extremities and the pulmonary evidence being only a few rales which is no wise impaired the aeration of the blood.

To summarize briefly in the right heart failure the congestion is of venous blood. In the left heart it is arterial.

In the brain in right heart failure the

symptoms are those of toxemia, psychoses, delirium, sleeplessness.

In left heart failure the cortical symptoms are those of an adematous brain, stuporous sleep and unconsciousness.

In right heart failure we have more or less dry lungs with Cheyn-Stokes respiration.

In left heart failure the patient drowns in his own effusion.

In right heart failure the gastric symptoms may be so manifest as to overshadow the cardiac inefficiency.

Not so in the left heart failure, there being no gastric symptoms present. In right heart failure with its portal engorgement the liver is congested with the gall bladder inflamed.

Not so in simon pure left heart failure.

In right heart failure the kidneys are involved after presenting the picture of an acute nephritis.

The kidneys may present a normal urinalysis even with a far advanced incompetence of the left heart.

The edema is early and rapidly progressive in left heart failure.

The limbs may be even attenuated and the features sunken in a rapidly advancing case of right heart failure.

The prognosis in left heart failure is good as to functional restoration.

The prognosis in right heart failure is bad.

The response to treatment in left heart failure is, as a rule prompt and gratifying.

The treatment of right heart failure leaves much to be desired.

The diagnosis of left heart incompetence is more or less easy due to the valvular preponderance.

The diagnosis of right heart incompetence is often difficult due to the secondarily involved organs with their overshadowing symptomatology.

In conclusion it was not intended in this paper to deal with the pathology of the heart. It was never intended to be other than a clinical discussion of the function of the heart, trying to separate the various phenomena, ascribing each to its source and emphasizing the fact that though the heart is one viscus its two parts are not one in function as are the kidneys and that these two hearts may fail more or less independently at times having in their train symptoms as separate as the functions themselves.

THE USE OF QUINIDINE IN THE TREATMENT OF HEART DISEASE*

THOS. J. CHARLTON, M. D.
Savannah

Quinidine was first used empirically in the treatment of heart disease, it having been found out that heart cases with malaria were benefited from a cardiac point of view when treated with quinine. In 1915 it was introduced as a therapeutic agent. Frey in 1917, started using quinidine, a derivative of quinine, and since then it has been the alkaloid of choice.

Auricular fibrillation is the form of heart disease in which quinidine has been most extensively used. Circus movement was first found to be present in auricular fibrillation and it is on circus movement that quinidine seems to be most effective. There is some evidence that premature contractions, paroxysmal tachycardia, auricular flutter, and auricular fibrillation are all varying degrees of circus movement. (Colgate, C. E. and McColloch, Hugh. Am. Heart J. Dec. 1926.)

To understand the action of quinidine one must understand the conduction of the heart in health and disease—In health the impulse is initiated in the sino-auricular node spreading uniformly throughout both auricles. The stimulus travels then from the auricle to the ventricle along the auricular ventricular bundle and both ventricles contract simultaneously. In diseases of the heart where arrhythmia is present this is not the order. Circus movement is a wave that starts pathologically, circles the venae cavre and keeps on returning along the same path, always meeting just ahead of it muscle that has already recovered from its refractory state. If the recovery from the refractory condition is even, the rate of this impulse is

*Read before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

very regular, but if, as in auricular fibrillation, the recovery is irregular in contiguous parts of auricular musculature, the result is a tumultous and disorderly one. In auricular flutter the auricular rate is generally between 200 and 350 per minute. Clinically with this rapid auricular rate there is almost always associated a certain degree of heart block, the ventricular rate being slower. (Oxford Med., Vol. II, p. 370.)

There are four main pharmacological actions of quinidine (1) a mild paralysis the vagus; (2) a lowering of the rate of sinus impulse discharges; (3) a slight decrease in auricular-ventricular conduction; (4) a diminishing of the refractory period of cardiac muscle and slowing of conduction in the muscle. (Lewis, T., et al. Heart Dec., 1921.) Lewis states that in the fibrillating heart, the rate of the auricular oscillations is slowed and the ventricular rate increased, until in certain cases the lengthening of the refractory period over the conduction time abolishes the circus movement and the pacemaker resumes its function. Nevertheless we must remember that quinidine is a muscle poison which exerts a distinctly depressant action on the myocardium.

One adverse feature in quinidine treatment, and this is especially true in auricular fibrillation, is that no definte prognosis can be made as to the outcome of the therapy. The character of the cardiac lesion, the degrees of decompensation, the duration of the disordered mechanism, and the age of the patient are not essentially related to failure or success with quinidine.

Before starting treatment it is important that the patient be thoroughly digitalized, with complete rest in bed and other measures if necessary, to bring his heart to the best possible degree of compensation. The common criteria are used to estimate the condition of the circulation, such as the slowing of the apex rate, a decrease in the pulse deficit, loss of edema, and an increase in vital capacity. Complete digitalization is most essential but has not always been used in these cases. Quinidine tends to cause an increase in ventricular contractions so that it is well to start with the ventricles contracting slowly. Digitalis tends to slow the ventricles since it causes a block in the auricular ventricular bundle and increases the conduction time thus preventing the weaker beats from coming through to the ventricles. When the patient is in the best condition that it is possible to secure(digitalis treatment is stopped and the quinidine is started. The first dose is a trial dose and 0.2 gms. of quinidine sulphate is given. If no untoward symptoms develop the dose is increased to 0.4 gms. and given every four hours day and night. There is no cumulative action to quinidine so that the continuous administration of the drug is important. During this period the patient has to be frequently examined because no idea can be formed as to when the rhythm will become regular from the amount of the drug taken. In some cases only a few grams are necessary to restore the rhythm while as much as 19 gms. have been given. But as a rule restoration of the rhythm, if it is going to take place, does so after 3 to 5 gms. have been given. Some cases which have not responded to the 0.4 gm. dose have done so after the dose was increased to 0.8 gm. every four hours.

The purpose of quinidine therapy is not only to reestablish a normal rhythm but also to maintain that rhythm after it has been restored. The best way to do this arouses a diversity of opinion. Some authorities advocate giving 0.2 gm. quinidine two or three times daily while others use digitalis in small doses. I have used digitalis in the cases that I have treated.

Some cases never become regular and the duration of restorated rhythm varies greatly from a few days to a few months to years. The percentage of cases of auricular fibrillation restored to normal rhythm is higher than is generally supposed. Riecker (Am. J. Med. Sc., Aug. 1925) reports 52 cases with the normal rhythm being restored in 79 per cent of the cases. Seven of these cases were associated with thyro toxicosis, all of which returned to sinus rhythm, but in 3 the effect was transient. Stroud's series contains 42 patients and in 64 per cent the immediate results were successful. In a compilation of 648 cases, 366 showed a reversion to nor-

mal rhythm. It is hard to tell how long these cases have maintained their normal rhythm but it is certain that some of them have done so for years.

A question of much importance is whether a heart that has been restored to normal rhythm is more efficient than a slowly, that is compensating, vibrillating heart. It stands to reason that a normal rhythm with normal filling and emptying of the auricles is more efficient than one that is irregular, regardless of the fact that a person with a fibrillating heart may continue his daily duties for years unconscious of any cardiac impairment. Bloomguard and Weiss have demonstrated this experimentally. They injected certain eminations of radium C in the vein of the right arm and with a radium detector determined the time of arrival of these eminations in the artery of the left arm. They found that the length of time was shorter in the cases of restored normal rhythm than in the cases of slow fibrillation. However the last two cases of auricular fibrillation that I treated with quinidine felt more uncomfortable when their rhythm became regular than they did when they were slowly fibrillating with digitalis.

The action of quinidine has been more thoroughly studied in auricular fibrillation than in any other form of cardiac disturbance but it is now being used in the other forms of arrhythmias. It has no value in myocarditis per se nor in endocarditis.

Extrasystoles, both auricular and ventricular, while not being serious in themselves, are very distressing to the patient. A fairly high percentage of these cases yield to small doses of quinidine. One case, typical of this condition, was seen recently. The patient prior to an attack of influenza had always been healthy and had never experienced any difficulty with his heart. Following influenza he began to have extrasystoles which were very annoying to him. He was examined for possible foci of infection and these not being found he was put on 0.2 gms. quinidine every 4 hours. After two days the extrasystoles disappeared and did not reappear on the discontinuance of the drug. Some cases of paroxysmal auricular tachycardia have responded well to this drug, and one case of paroxysmal ventricular tachycardia is reported to have returned to normal rhythm after other measures had failed. I have had another case of this type proven by electrocardiogram.

Patient, male, white, occupation foreman; age, 41 years; admitted to the hospital 1-1-28, discharged 1-11-28. History: Three days prior to admission patient felt dizzy and short of breath. When he lay down he seemed to feel heart beating all over body. At this time there was no severe pain. No fever, no chills. Nausea has been present and some vomiting, has been able to sleep very little. For past 24 hours a sharp pain has been felt in the chest on deep respiration.

Past history: Essentially negative.

Physical examination: Patient is prostrated, breathing rapidly.

Lips and ears are cyanotic.

Heart somewhat enlarged to right and left, rate rapid. Heart sounds at apex loud and regular.

Abdomen: Some tenderness and rigidity in right upper quadrant. Edge of liver palpable at coastal margin. No edema of feet.

Heart rate 200 per min. Blood pressure 75-65. Temperature 101 rec.

Laboratory findings: Urine 3 plus albumen, W. B. C. 22,800; next day 18,800, with 93 per cent polymorphonuclear leucocytes.

X-Ray shows right-sided hypertrophy of heart.

Wassermann later found to be positive.

On admission patient was given 15 m. of digalen hypodermatically and repeated in three hours. Heart rate, 180-186 per min.

Quinidine started, 0.4 gms. every four hours, rate 186. After four doses heart rate was 88 per min. Quinidine dosage made 0.4 gms. b. i. d. for one day and discontinued. Note made, day rate became normal, shows patient feeling fine, except for occasional sensation of dizziness. Albumen disappeared from the urine and the leucocyte count returned to normal.

Numerous electrocardiograms were taken and showed the tracing characteristic of paroxysmal ventricular tachycardia. Before discharge the tracing was normal. Patient was seen about one week after discharge and was feeling well except for dizzy spells at times. When later seen complained of short attacks of palpitation.

Apparently in this case quinidine had something to do with terminating the attack of tachycardia, but as these cases are char-

acterized by abrupt cessations, conclusions cannot be drawn too definitely from one case.

The grave dangers of quinidine therapy are paralysis of respiration and embolism. Occasionally these accidents occur but they are rare and have been overestimated. It is doubtful if embolism occurs more frequently in cases treated with quinidine than it does in similar cases not so treated. Occasionally the milder forms of cinchonism manifest themselves but they should cause no great concern.

Summary: Quinidine has a very definite place in the treatment of cardiac conditions, but the pathology of these conditions should be understood. In auricular fibrillation the patient should be thoroughly digitalized before starting quinidine. The dangers of quinidine therapy, paralysis of respiration and embolism, are slight.

DISCUSSION ON PAPERS OF DR. JARRELL AND DR. CHARLTON

Dr. H. M. Bowcock, Atlanta: We should always give thought to the mechanical basis of the symptoms of heart disease in some such manner as that outlined by Dr. Jarrell. We are very prone at times to lose sight of the fact that the heart has a definite anatomical structure with a right and left portion—that it consists of two hearts combined in one organ. Unfortunately, every case of heart disease cannot be classified as predominately right or left-sided disease because the disturbance in function may be about equal on the two sides.

The most clear-cut symptoms of predominantly right-sided failure are seen when coronary thrombosis or occlusion involves the arteries of the right heart. Symptoms of predominantly left-sided failure are most frequently encountered in individuals with high blood pressure. These attacks which occur in the hypertensive state are usually transient and are accompanied by marked dyspnoea and pulmonary edema; the disturbance usually responds quickly to the administration of morphine or to bleeding. The picture of left-sided failure may be marked in thrombosis or occlusion of the arteries of the left heart.

Discussing Dr. Charlton's paper, I think one should emphasize certain contra-indications to the use of quinidin. In the first place, quinidin should only be given in full therapeutic doses while the patient is under direct observation in a hospital or in the care of a competent nurse. In cases of fibrillation of long standing, and in cases of shorter duration, if there is marked sclerosis of the coronary vessels, fatal embolism may follow the administration of the drug. A recent paper by Levine and Fulton shows that quinidine may be tried with some hope of success for the relief of paroxysmal tachycardia following coronary occlusion. In employing the drug under such circumstances, we must bear in mind that a fatal embolism may result; on the other hand, such a cardiac disturbance is frequently fatal. Generally, digitalis should be given to the limit of its tolerance before employing quinidin in cases of heart disease with decompensation. If decompensation is not relieved by digitalis, quinidin is usually of no value, and its use may be dangerous. In most types of arrhythmia or tachycardia without definitely demonstrable organic bases, and in which digitalis has been of no benefit, quinidin may be tried with caution; in some instances the quinidin will produce the desired results. At present, there is no way of determining when the drug will be of value except by trial.

Dr. H. I. Reynolds, Athens: In discussing Dr. Jarrell's paper, I think it is advisable to say that certain signs and symptoms may indicate right-sided failure and other signs and symptoms may indicate left-sided failure. However, I am a bit doubtful whether there is right or left-sided failure without some functional disturbance of the other side,, even though we are unable to demonstrate it. The paper of Dr. Jarrell I think is very interesting, and agree that it is a good plan to study heart disease from his viewpoint. We should try to interpret from the symptoms just what part of the heart is predominantly involved.

In quinidin there seems to be two things that are more or less important for the success of quinidin therapy. The first is the degree of decompensation, and the second is the length of time that fibrillation has existed. I mean by the success of treatment the restoration of normal rhythm, not the maintenance of that rhythm, In Maynard's cases 90 per cent of those classed as having good compensation; 56 of those with fair compensation; and only 43 per cent of those with poor compensation were restored to normal rhythm.

As to the length of time fibrillation has existed, in those cases in which it has existed more than a year the degree of success was much less than in those where it had existed a shorter time. Only about 66 per cent were

restored to normal where fibrillation had existed more than a year.

There is no way of telling what will happen in quinidin treatment. We do not know whether normal rhythm will be maintained or not and from that point of view the degree of decomposition does not seem to make much difference. Some of the cases with bad decompensation remained normal for years, whereas those with good decompensation remained normal only for a week or a month. That brings up the point that the tendency is for auricular fibrillation to recur. There have been cases in which auricular fibrillation has been converted into normal rhythm five, six or seven times, but there usually comes a time when the rate cannot be restored to normal.

Dr. John R. Broderick, Savannah: Both papers were well given, and with the discussion already carried forth there is little to say, except that I think in Dr. Charlton's paper the question of the heart in the colored race, which both Dr. Charlton and I have studied at some length, should be more stressed. The heart of the colored man does not seem to respond to quinidin and digitalis as does that of the white man. That may be due to the fact that it is not so easy to eliminate the focus of infection and to regulate the diet.

Another point in Dr. Charlton's splendid paper, which I think might be brought out a little more in detail, is the fact that digitalis can and should be given before quinidin treatment. I have read and at times I have taught that it is dangerous to use quinidin after digitalis. Both Dr. Charlton and I have used quinidin after thoroughly digitalizing the heart without any bad effect at all.

One point was mentioned about having the patient in the hospital when using quinidin. I may have been unwise, but I have used quinidin in the home and in my office practice, seeing the patient every day and using the drug in small doses.

In cases of extrasystole, whether of neurotic origin or of mild toxic origin, quinidin can be used successfully. We have, I think, treated more cases of extrasystole than of auricular fibrillation.

Another thing is that I think we wait too long before instituting quinidin therapy. Sometimes after everything else is exhausted and we cannot think of anything else to do, perhaps to satisfy our conscience or the family, we institute quinidin therapy. I have had one case of auricular fibrillation as the result of thyrotoxicosis in which quinidin was used without any restoration to normalcy, but with no deleterious effects on the individual.

Dr. Julian K. Quattlebaum, Savannah. I wish to say a word about the use of quinidine in hyperthyroidism with auricular fibrillation. My experience with the drug is limited to such cases.

When the rheumatic heart begins to fibrillate the auricle remains dilated. My impression is that the danger of restoring the normal rhythm of the heart with quinidine is one of embolism by dislodging endocardial vegetations. The heart of hyperthyroidism is not usually complicated by the endocarditis and the danger of embolism here is not so probable. I have frequently used it and have observed no ill effects whatever. I think it is indicated and large doses can be given.

I wish to recommend the use of quinidine for the auricular fibrillation of toxic goiter but of course not to the exclusion of iodin.

L. Minor Blackford, Atlanta: My experience with quinidin in the treatment of idiopathic fibrillation has been limited to one case. This patient died suddenly on the third day. We were utterly unable to explain the cause of his death, but we did not have an opportunity to examine his brain. However, I have had considerable experience in fibrillation associated with exophthalmic goiter. Plummer believes that Lugol's solution is the drug of choice in the treatment of this condition. Many patients fibrillate for several days after operation and come back to normal within a few days with no other treatment. Plummer does not use quinidine in any of his cases of exophthalmic goiter or adenomatous goiter with hyperthyroidism.

We studied the case above referred to a couple of weeks before we started quinidin and thought that it was an ideal case for this treatment, so I would not like to have it appear that he died "before we finished studying the case." Also I have checked up the present custom in Rochester since making my remarks and find that they still do not use quinidine in goiter cases.

Dr. Thomas J. Charlton, Savannah (closing): The only thing I have to add is that I agree with the gentlemen that it is customary to say that in paroxysmal auricular fibrillation the patients respond very well to quinidin treatment. In those cases the duration has been short and many of them would be restored to normalcy by nature, and we cannot say how much the drug has to do with it in those cases.

The point Dr. Broderick brought out about the Negro not responding well to

quinidin therapy has also been my experience. I have treated a few cases by this method, but my results in the Negro race with other agents has also been very disappointing. I have not found that they respond well to digitalis.

I think quinidin has a very definite place in the armamentarium of the medical man, and believe it should not be held off for a last resort. We should take these cases when we first see them. I think quinidin got its bad name because so many doctors have waited until the patients were at death's door before starting quinidin therapy.

GLAUCOMA SIMPLEX*

GRADY E. CLAY, M.D.
EUGENE R. VERNOU, M.D.
Atlanta

Today glaucoma is causing more blindness after middle age than any other disease. More than thirty per cent of blindness is due to this disease and it appears to be on the increase. The medical profession today is largely responsible for this pathetic condition. In any large eye clinic about each week patients will appear stating that they have been told they had cataracts and must wait until the cataracts were ripe for operation; they come for the removal of the cataract only to learn that they have glaucoma and are hopelessly blind. An individual who complains of any visual disturbance whatsoever should be considered as having glaucoma until proven otherwise; when this is done by the medical man, refractionist and ophthalmologist the percentage of blindness from glaucoma will decrease.

The only possible definition for glaucoma is increased intra-ocular pressure, yet etiological factors today are almost as obscure as in the time of Donders.

The symptoms are very insidious and for this reason the patient is often not aware of the disease until very late. The chief complaint is a gradual loss of vision, while central vision may remain very good until late. Halo vision, such as seeing rings around lights, is a frequent complaint. Diminished light sense may be an early symptom, the patient complaining of poor vision on going from a light to a dark room.

Increased tension is of course the cardinal sign and will always be found at some time during the course of the disease, and if the tension is taken repeatedly it will usually be found more elevated at night. In the majority of cases seen one can generally tell the tension by finger palpation and I wonder how many men in general practice ever take finger tension. The tonometer is an instrument of precision and repeated tests with it usually reveal increased tension. If not, the instillation of a drop of homatropin will reveal it, but this must be followed with the instillation of eserine. One frequently hears of glaucoma developing following the instillation of dilating drops. Duane says "An eye which develops glaucoma under dilating drops is going to develop glaucoma anyway and it is not an unmixed evil to have it develop under our eyes." Usually the degree of tension and loss of vision go hand in hand.

The examination of the funds usually presents the typical picture of a punched out nerve head; there is a deep cupping and a pale disc. The arteries frequently are pulsating, though this is not always pathognomonic of glaucoma.

The careful study of visual fields is most important as it is most frequently the most valuable diagnostic aid. It is the only means of clearly showing the progress of the disease, and the one important factor in determining when operative measures should be resorted to. The fields of glaucoma usually show a marked contraction of the form especially on the nasal side, while colors may not be contracted in proportion. Siedel found the most frequent change, and often the only positive finding, a flower shaped scotoma arching up and down from the blind spot and around the fixation point, the scotoma may be present on some days and absent on others. When this scotoma is fully developed it is known as Bjerrum's type.

In the treatment of glaucoma no set rule can be formulated, but it may be said, that if medical treatment does not control the tension and preserve the visual fields one must resort to surgery.

A careful general study of every patient

*Read before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

should be made. Any foci of infection should be removed, and plenty of rest should be obtained. Worry and excitement must be avoided. Emotional states often bring on an attack of glaucoma or greatly increase the tension. If a patient is passing through the menopause this should be artificially hastened.

In the local treatment eserin should be used first, two or three times daily, often enough to keep the pupil small, and a drop should always be put in the eye at bedtime. If after a few days the tension is not properly reduced and the fields controlled we then advise using glaucoson drops, believing it to be much more effective and less dangerous than the injection of adrenalin. However, eserin should not be discontinued.

Glaucoson has been recently brought forward by Hamburger of Germany and he cites cures of glaucoma with it, but such has not been the experience of those reporting its results in America. It is a two per cent levo rotatory adrenalin compound. In using it the patient should be lying down, the eye first anesthetized with butyn or holocain, and the five drops instilled into the eyes fifteen minutes apart, after which eserin should be instilled. The patient should be kept under close observation for about two hours after its use, as there have been a few reports of sudden rise in tension. In our experience every case has had a marked lowering of tension following its use, and we believe it is the greatest drug at our command in the treatment of glaucoma.

In the large majority of cases we must resort to surgery for relief. Any case which has a marked contraction of the visual fields and a high tension should be operated upon without delay, and any case which can not be kept under very close observation should receive immediate surgical treatment. Should the tension remain above thirty millimeters of mercury even though the fields show no regression and cases with low tension but whose fields progress should receive surgical treatment. Some regard cases whose visual fields are contracted to within ten degrees of the fixation point a dangerous case for surgery. This is true, but such a case which does not receive surgical treatment is sure to go blind.

Operative procedures for the relief of glaucoma are numerous and this may be indicative of unsatisfactory results. Up until the past fifteen years the broad iridectomy was the operation of choice. This led to a large percentage of failures and warranted the development of the filtration operation, of which there are more than fifty.

In a case complicated with marked lenticular changes, and especially if the anterior chamber be shallow, a broad iridectomy should be done. In all other cases it is our belief that the Elliott trephine or suture filtration operation is the procedure of choice.

It has been decided that the case is an operative one, miotics should be discontinued the day before operation, the patient should be dehydrated by giving small amounts of salts each morning, and two hours before operation glaucoson drops should be instilled. After the eye is prepared for operation a deep injection of two per cent novocain and adrenalin should be given subconjunctically. It will be found that this will materially lower the tension and thereby make the operation more safe. Should the tension still be high I see no wisdom in doing a posterior sclerectomy, but proceed with the operation at hand.

In Europe and America the trephine seems to be the operation of choice among the filtration operations. It is an operation of precision and must be properly done to obtain satisfactory results. The conjunctival flap should be large and thick. The most important step is the careful dissection down to the limbus, and after this we believe that none other than a one and one-half millimeter blade should be used. Contrary to most operations we believe the trephine should be held backward so that the trephine button will hinge forward or toward the cornea, then as soon as the iris prolapses it can be cut and a peripheral iridectomy obtained without disturbing the button. The modification in technique which we advocate we believe is a great step forward, namely, remove only about one-third of the trephine button and carefully replace the rest. Indeed we are beginning to feel that none of the button should be removed. At any rate a small hole leaves a small avenue of escape and helps to maintain a more normal tension and does

not produce such a large bleb over the trephine opening.

We have been doing the suture filtration operation for the past two years in the Eye Department of Emory University, the Colored Grady Hospital. In this operation we are attempting to develop a small filtration scar and a broad area of filtration. About thirty operations have been done with satisfactory results but we are withholding final conclusions until more have been operated upon by this method.

The operation is simple and devoid of danger. A small conjunctival flap is dissected down to the limbus and then a broad kerotome is passed into the sclera three millimeters back of the limbus and passed well into the anterior chamber, making a broad sclero-corneal incision. Following this a broad iridectomy is done, after which the anterior lip of the sclero-corneal wound is grasped and a double armed mattress suture is passed through from without in, coming out through the lips of the wound. The sutures are then passed up under the conjunctivae as far as possible and brought out and loosely tied. Then the conjunctival incision is sutured with four sutures, atropine is instilled and pads applied. On the twelfth day the drainage suture is removed.

In conclusion, glaucoma is one of the most common and serious eye diseases occurring after middle life and it is hoped that men in general practice may attempt to recognize the disease earlier and thereby help prevent such a large percentage of blindness.

GLAUCOMA FROM THE VIEWPOINT OF THE GENERAL PRACTITIONER*

F. Phinizy Calhoun, M.D.
Atlanta

No apology is necessary when a quotation is made from the original article of that premier ophthalmologist, Albrecht Von Graefe (whose 100th birthday anniversary was celebrated last year), in which he announced his epoch making operation of iridectomy for the relief of glaucoma.

He wrote "It is the duty of the physician to refer the patient with glaucoma to the oculist for strict observation, and vice versa, it is the duty of the oculist the warn the family physician to look for the symptoms which call for operative interference. Previously a glaucomatous eye was considered incurable the moment the diagnosis was made. A physician never had to reproach himself for delay in this respect. Conditions are now changed, and an eye which has been blinded from acute glaucoma may as well excite suspicion of neglect as a badly set fracture or a blocking of the pupil following iritis." This admonition spoken in 1857, is equally true today.

Glaucoma is today the most important single subject in ophthalmology, for its study is attracting the attention of so many minds: the research worker in his effort to find a cause, the surgeon in his endeavor to relieve symptoms, and, not the least, the patient, for the laity is becoming informed of the symptoms of glaucoma and the knowledge that unless proper treatment is administered, blindness follows.

It is not generally appreciated that from one-fourth to one-third of all blindness after 45 years of age is due to glaucoma. Expressed in age groups, from 30 to 45 years, glaucoma ranks third of all causes of blindness or 11.61 per cent; from 45 to 60 years, glaucoma heads the list with 27.27 per cent, and from 60 to 75 years, 58.11 per cent. Without regard to age, that is from birth, glaucoma is the cause for blindness in 9 per cent of all diseases or accidents to the eye.

Accepting these figures of Magnus, which are regarded as reliable, glaucoma then is an eye disease which from a humanitarian and economic viewpoint, demands our professional respect. It would seem proper then, that every educated, well meaning doctor, regardless of his inclination or specialty, should know something about glaucoma. The general practitioner, who often first sees the patient in the prodromal or acute stage of glaucoma, should have more than a passing knowledge of the disease and he should be alert in his observation and diagnostic ability. To him do I especially address my remarks, and at the same time, I apologize to my col-

*Read before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

leagues in ophthalmology for my academic discussion.

It is a deplorable fact, that the eye surgeon commonly sees in his clinic and too often in his intelligent private patient, advanced glaucoma in one eye and incipient glaucoma in the fellow eye. As medical men and advisors to the public, we alone must shoulder the blame. If the public had received the same information regarding glaucoma as has been given to symptoms and dangers of communicable diseases, the statistics of blindness would no doubt have been greatly reduced.

The word Glaucoma, like many other medical words and terms, is of ancient Greek origin (ylaukos) meaning a hardness of the eye, with a greenish pupillary reflex. Modernly the word is used to indicate an abnormal increase in the intra-ocular tension.

For the purpose of classification and discussion, primary glaucoma only concerns us, and of that variety, two types are commonly recognized, (a) congestive or acute (incorrectly called inflammatory) glaucoma, and (b) non-congestive glaucoma — glaucoma simplex. It is the acute congestive glaucoma that is so dangerous, so treacherous, often mistaken for acute iritis and the type that the general practitioner first sees.

To enumerate the symptoms would be to give a classical text book description, to which you are referred. There are, however, several of the subjective and objective signs which should be stressed. Often preceding the acute attack there are one or more prodromal attacks at which time the patient especially complains of slightly dimmed vision, the seeing of haloes around lights, and of slight pain in the eye, which is often thought to be a simple neuralgia. Household remedies, such as the application of heat and the taking of an anodyne tablet, frequently relieves within a few hours. A recurrence of the same symptoms, usually with greater frequency and severity, will almost certainly follow, often precipitated by some unusual mental or physical upset, and the eye then goes into an acute attack of glaucoma.

There is hardly a practitioner in this audience who cannot recall having seen a case whose chief complaints were neuralgia about the eyes and so called blinding headache, often associated with a gastro-intestinal upset and accompanied by nausea and vomiting. The chances are that the patient had a prodromal or a mild attack of glaucoma, and relief was given by the administration of (1) a hypodermic of morphine, which contracted the pupil, thus allowing the aqueous in the anterior portion of the eye to properly drain, and (2) a large dose of epsom salts which partly dehydrated the body and the eye. Excellent treatment to be sure as a temporary measure, for both remedies lowered the intra-ocular tension, but was the true nature of the disease recognized?

Had the eye been examined, the globe would have been found congested, the cornea a little hazy, the pupil moderately dilated, and the tension of the eye as estimated by finger palpation (using the index fingers as one does in palpating for fluid in a cyst or abscess) would have revealed a hard globe. One drop of eserine or pilocarpine solution instilled into the eye, thus contracting the pupil, would have quickly but temporarily relieved the symptoms.

The symptoms in a severe acute attack are the same, except that they are exaggerated in every way. The ocular pain is excruciating and constant, the sight is rapidly impaired and declines until only light is perceived, the upper lid and conjunctiva of the globe are at times edematous, the globe is markedly congested, the pupil is dilated and inactive, the cornea is cloudy and the eye is stony hard. Unless glaucoma is recognized and unless immediate medical or operative treatment is given, sight is hopelessly lost.

In time, in the state of absolute glaucoma, enucleation is required for the relief of pain.

Glaucoma simplex, or the non-congested type, is a disease of greater chronicity; pain is not a symptom and as a rule there are no external signs or symptoms except at times a shallowness of the anterior chamber, which the unaccustomed eye cannot well detect. A gradual loss of vision in one or both eyes, is the chief reason which brings the patient to the doctor. The practitioner may suspect glaucoma, and if the eye is palpated one may find that the tension is raised. When this patient consults the oculist, which he usually

does for a fitting of glasses, there is found reduced vision which cannot be improved, a cupping of the optic nerve which is undergoing atrophy as seen by the ophthalmoscope, certain definite changes in the visual fields indicative of glaucoma, and an increase in intra-ocular tension, as estimated by palpation or more precisely by the tonometer—an instrument of greater accuracy.

Glaucoma simplex is not a disease of urgency as in the acute type, yet in some few cases it may go into acute glaucoma, but it should be appreciated that unless the symptoms of increased intra-ocular tension is relieved by operative or medical treatment, blindness in both eyes is inevitable.

There is at times some difficulty in differentiating acute glaucoma. It is my custom, when instructing undergraduates, to stress the point that every congested eye should be considered a glaucomatous eye until it is proven otherwise. Thus an acute conjunctivitis is of course ruled out by the presence of secretion in the lids and the normal condition of the cornea, pupils and tension. In acute iritis, which offers some confusion to the untrained eye, the cornea is usually clear, the pupil is not dilated but small and fixed and as a rule the tension is normal or subnormal.

I believe that the two most important signs in making a differentiation in acute glaucoma, are the pupil and the tension of the eye; and to repeat, in glaucoma the pupil is dilated and the eye is hard.

Little is known as to the true cause for glaucoma. Indeed the causes may be widely different in each case. Glaucoma rarely occurs in individuals in good general health, the knowledge of which has given rise to the often quoted remark by La Grange, that "an eye attacked by glaucoma is a sick eye in a sick body."

Lately I have studied with the assistance of some of my colleagues in internal medicine, sixty-four private patients who had glaucoma. The summary of the study shows that—

(1) A vascular disease was present in 95 per cent of the cases.
(2) Syphilis was present in 15 per cent of the vascular cases.
(3) A nephritis was present in 40 per cent of the vascular cases and 37 per cent of all 64 cases.
(4) An abnormally high diastolic pressure was present in 57 per cent.
(5) An abnormally high systolic pressure was present in 42 per cent.
(6) A dilatation of the heart or aorta was found in 60 per cent.

These figures confirm Charlin's views that in 90 per cent of glaucomatous patients, a general vascular disease is found. His statistics showed syphilis to be a dominant fâctor for this viscular disease in the pre-senile age, while arterior-sclerosis with an accompanying nephritis was the cause in cases over 60 years of age. One should not infer that a general vascular disease is the cause for glaucoma, but it is a temptation to think that as our limited knowledge of hypertension and associated cardio-renal-vascular disease increases, we may find that a mechanical or chemical change takes place in the vascular tunics of the eye which would influence an increase in intra-ocular tension.

The most important item in the treatment of acute glaucoma, is early diagnosis. The rest of the treatment can be summarized in two words, (1) Medical, that is the use of solutions of eserine or pilocarpin to contract the pupils and (2) operative, namely iridectomy. The best time to operate is in the interval of a prodromal attack. There is danger in the employment of these two forms of procedure, and they must be used with a knowledge and an understanding.

In conclusion, I would like to leave one thought with the general practitioner who frequently first sees glaucoma; use three senses when visiting a patient with symptoms pointing to glaucoma, (1) *hearing*, to listen to the patient's complaint, (2) *sight*, to observe the eye and to detect the change incident to glaucoma and (3) *touch*, to estimate the tension of the eye. To employ these will save many eyes.

REFERENCES

Van Graefe, "Memoirs on Iridectomy," English Translation, 1859.
Magnus, American Encyclopedia of Oph. Vol. 11, p. 1126.
Charlin. "Vascular State of Patients with Glaucoma" Washington Congress of Oph., 1922.

Next Annual Session
MEDICAL ASSOCIATION OF GEORGIA
Augusta, May 14, 15, 16, 1930

DISCUSSION ON PAPERS OF DRS. CLAY AND CALHOUN

Dr. B. H. Minchew, Waycross: Any condition which brings about the tragedies pointed out by Dr. Clay and Dr. Calhoun deserves the careful attention of our profession. Every community has its blind man, and we are beginning to learn that a great many of such cases of blindness is the result of glaucoma.

I wish to emphasize the warning of Dr. Clay, that it is dangerous to diagnose a progressive blindness as a cataract formation, unless the actual opacity can be demonstrated by the use of the ophthalmoscope. A large number of the cases of progressive blindness is undoubtedly chronic glaucoma, and the general practitioner should learn to detect an increased tension. This can only be done by practice upon normal eyes. If one will have the patient look down and palpate well behind the tarsus, the actual tension of the globe can be detected. A fine tactile sense can soon be developed to the point that increased tension of the globe can be determined.

Dr. Calhoun has warned us against the mistaken diagnosis of iritis in the presence of an acute glaucoma. We have thought so much of focal infection recently, that any inflammatory area is thought to be caused from some focal point. Any injury in which there is an increased volume of fluid within the globe will produce a temporary glaucoma, and great damage may be done by the intraocular tension even if it exists only a short time. We should think of glaucoma in relation to arthritis rheumatism or diabetes, if there should be a diminution in vision as a complication of such a disease. Heredity plays some part, we are told, in glaucoma, but this type shows the glaucomatous state at an earlier age.

To my mind, the treatment of glaucoma simplex is medicinal and surgical, and more often surgical. In the acute, congestive type, or the recurrent form, it is almost 100 per cent surgical. Any operation which restores function to the filtration angle is useful. A wide iridectomy has proved more satisfactory than any other method in use. When we are told that 75 per cent of the body energy is stimulated by what we see, and that 80 per cent of man's intelligence comes through vision, we must realize how necessary it is to conserve this important function.

Dr. W. H. Cabaniss, Athens: No physical disability can compare with that of blindness and I am sure that everyone who has heard these splendid and timely papers on glaucoma will feel an added sense of responsibility. A disease whose onset is so insidious, whose occurrence is so frequent, and whose consequences if unrecognized are so disastrous, is worthy of much consideration even by those of us who are not primarily concerned with diseases of the eye. As physicians, we can take no pride in the fact that 9 per cent of all blindness and at least 58.11 per cent of the blindness occurring in individuals between the ages of sixty-five and seventy-five years is caused by a disease which in the majority of instances is not recognized until far advanced.

While no definite cause for glaucoma has been found, it seems to be closely related to vascular disturbance, and at least 90 per cent of the cases occur in individuals who have some disturbance of this type. Many general practitioners have an opportunity to see these cases in the early stages, and if they are alert many of these patients can have the advantage of an early diagnosis, which is most necessary for successful treatment. In glaucoma, as in cancer, early diagnosis offers the best hope of successful treatment. In glaucoma of the non-congestive type because of the absence of pain the disease is often far advanced before it is discovered. Consequently, I wish to urge the general practitioner to pay close attention to the subjective symptoms described by the patient of a "halo effect," of the so-called "neuralgia" about the eyes, and of frequent changes in glasses. In such cases if the physician who sees the patient frequently and is in close contact will attempt to determine the tension by finger palpation he can detect many of these cases early.

I think if every practitioner will follow the advice of Dr. Calhoun regarding every inflamed eye being considered glaucomatous until proven otherwise it will be of much assistance.

I thank the gentlemen for their excellent papers, and wish to admonish the general practitioner to refrain from the use of atropin in the eye until he knows that it is not contra-indicated.

Dr. G. H. Lang, Savannah: Although glaucoma is in the strictest sense of the term a problem of the ophthalmologist, the papers which were presented to us today have made it so interesting that I am sure each and every one of us has been much benefited by them. The unusual way in which Dr. Clay presented the subject should be noted for it was very interesting and instructive. It is regretable that his films did not show up better, for they very graphically portrayed many points of interest, particularly to those who are interested in ophthalmology.

The portion of his paper touching on treatment was very interesting to me in that he spoke of "Glaucosan" which is one of the newest remedies in the treatment of this dread condition. I was glad to hear him say that he feels this is the best thing we have today. I have refrained from using Glaucosan because of the adverse reports in almost every case that is reported; that is, they show an increase in tension after the use of this drug. Hamburger, quoted by Forchell in the Journal of Ophthalmology, has recently perfected a substance called "Aminoglaucosan." I wonder if Dr. Clay has had any experience with it. Hamburger claims it is the strongest thing we have, and that one drop will dilate the pupil. Forchell also brought forth the fact that Dr. ..... has been doing some work with a substance called ergotamin on the sympathetic nervous system. He found that if ergotamin was injected into a rabbit it had a paralytic effect on the sympathetic nervous system and promptly reduced the tension in the eye. He worked out a substance called gynergett which is now on the market and can be used for decreasing ocular tension. I should like to hear Dr. Clay say whether he has had any experience with this.

Just a few words regarding Dr. Calhoun's paper. It seems to me this should come logically from the general man, as he stated that the paper was intended for the general man, to bring before him the importance of glaucoma of the various forms, particularly the acute type. Dr. Calhoun's paper, in which he referred to the study of sixty-four cases, was splendid and much worth while.

These two papers have been most helpful, and I believe all of us must have benefited by them. I wish to express to these two gentlemen my deep appreciation of the debt all ophthalmologists owe them today.

Dr. Grady Clay, Atlanta (closing): I have little to add except a few words concerning aminoglaucosan. Glaucosan and aminoglaucosan were perfected by Hamburger of Germany, and a short time ago he claimed cures for glaucoma. Hamburger uses a 2 per cent solution, which has been proven to be of real value in glaucoma simplex. Most of those in this country who have tried it heartily recommend its use. Aminoglaucosan is one of the most powerful myotics produced. One drop will immediately cause a pin-point pupil, even though the pupil has been dilated with atropin previously. The use of aminoglaucosan causes marked congestion and much pain, and for this reason it has not been used much by the profession, and those who have used it have not had the remarkable results claimed by Hamburger. I have used it only once. The patient immediately left the office, and I did not blame her. I do not believe aminoglaucosan is as yet a good drug in glaucoma.

I wish to emphasize one point in my paper and that of Dr. Calhoun's. That is, that in glaucoma simplex the symptoms are very insidious, and for that reason every patient coming to us for reduced vision should be classed as glaucomatous until definitely proven otherwise. Every individual with pain and redness in the eye, as Dr. Calhoun stated, should be classed as glaucomatous until proven otherwise. If we will universally adopt this plan the percentage of blindness from glaucoma will surely decrease.

OUR POISONOUS SERPENTS*

T. E. OERTEL, M.D.
Augusta

I think I may presume that there are very few physicians who have taken the trouble to familiarize themselves in even the slightest degree with the species of poisonous snakes in our immediate section. To them as to the average person a snake is a snake. Every serpent is presumed to be poisonous and is to be killed on sight. The purpose of this paper is to give to the profession of Georgia and surrounding territory a brief review of those serpents that are harmful with their distinguishing characteristics and the best methods of dealing with the poisoned wound they inflict.

We are fortunate in that we dwell in one of the most favored spots on earth and one of our numerous blessings is comparative freedom from poisonous reptiles. In many countries nearly all serpents are poisonous and they exist in numbers almost past belief.

For example: In India some twenty-eight thousand souls die each year from the bites of poisonous serpents. In Australia nearly every snake is poisonous and very deadly.

In the rural districts of the southeastern states of our country serpents are still plentiful but out of a large number of species only a few are poisonous while many are not only

*Read before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

harmless but useful to the farmer and should not be killed.

I confess that I have little patience with the man who stamps the life out of any snake he meets and whose only reason is "that every snake is a damned snake and poisonous to me." Such an individual has not learned to use either his reasoning powers or common sense.

When I was a child I feared ghosts, now I know there are no ghosts to fear except the ghosts of my own past misdeeds. When I was a child I was taught to fear snakes. Now I have learned what snakes may hurt me—them I fear enough to see that they have no opportunitty to do me harm. The non-poisonous serpents are often beautiful and always interesting. Most of the harmless species feed on vermin and are in this way a distinct benefit to the agriculturist. I think one may safely say that all water snakes should be killed. They serve no useful purpose and while their food consists in part of frogs and the smaller reptiles they destroy great numbers of fish. While only one species among our water snakes is venomous they may all be classed as pests and killed without a tinge of conscience.

Among the harmless and useful species are the king snakes, black snakes, the coachwhip, chicken snake, rat-snake, milk snake, bull snakes, gopher snake and the spreading "adders," which are not adders at all, and, in spite of popular belief to the contrary, are entirely harmless. According to Ditmars they can not be made to bite. All their blowing and hissing and ugly looks are simply the protective attitude and manners of some of the poisonous snakes which this clown among serpents has learned to mimic.

From a mythological and biological point of view the serpents are of paramount interest but of course these subjects are very broad and beyond the scope of a short paper and so we must dismiss them for our present subject.

During the year of 1928 thirty-one cases of snake bite from poisonous serpents in Georgia were reported. Probably a like number received only a local notice and were not recorded.

Our Poisonous Serpents

The Pit Vipers. All but one species of our poisonous serpents belong to this group which is distinguished by a depression or "pit" which lies between the nostril and the eye. In this well marked pit there are certain peculiar nerve endings which may betoken some special sense. Their function has not been determined. To the pit vipers belong the rattle snakes and moccasins. All of the pit vipers have erectile fangs. Normally these lie folded backward, but when the reptile is angered and strikes, the mouth is thrown wide open and the curved fangs erected until they are at an acute angle with the jaw. The pit vipers do not bite in the true sense of the word. From the defensive position, which is a series of S shaped folds, —the true coil is a resting position—the head is darted forward and the projecting fangs stab the victim and make punctured wounds quite different from the superficial scratches that mark the bite of the non-poisonous snakes. An instantaneous contraction of the muscles about the poison sacs injects through the hollow fang—nature's hypodermic needle—a dose of the fatal secretion with which they are stored.

In Georgia we have three representatives from the family of rattle-snakes out of a total of nineteen species in the United States and Mexico. The characteristic appendage at the end of the tail is quite sufficient to distinguish these serpents from other pit vipers.

The great diamond back rattler (*Crotalus Adamanteus*), which reaches a length of seven feet or more, is found along our coast line but is not a hill snake.

The somewhat smaller though formirable timber rattle-snake (*Crotalus Horridus*) is more numerous and has a wide distribution. By the brown zig-sag transverse markings (which call to mind the lightning symbol in a Navajo blanket) this species is easily distinguished from the *adamanteus* along whose back there is a chain of well marked diamonds from which it takes its common name. The great size of both of these serpents, their formidable fangs, which often are half an inch or more in length and the huge dose of poison they may inject render

them the most dreaded among our poisonous serpents.

The third species is the ground rattlesnake (*Sistrurus miliarius*). Although this serpent is small, being when adult only two feet in length, it is capable of inflicting a wound which in children may be fatal.

Adults usually recover from its bite even without treatment. The small size, the diminutive rattles, which are almost abortive, and the irregular, brown mottled markings upon a grayish background readily distinguish this snake from the young of the other two species.

The water moccasin (*Agkistrodon Piscivorus*) that lurking death of the swamps, often called the cotton-mouth because of the habit it has when alarmed of hissing and opening wide the mouth which is lined with a whitish mucous membrane. By the unlettered every snake found within a mile of a watercourse is prone to be called a water moccasin. Several other species of water snakes are popularly credited with lethal powers. Among these is the so-called "water-rattler" and the "copper bellied moccasin," both harmless snakes albeit their looks are against them for they have both "broad heads" and "stump tails" which physical characteristics are popularly believed to be a sure sign of poisonous attributes. The coloration of *A. piscivorus* varies greatly dependent upon locality, age and whether or not the snake has recently shed its skin. Identification is rendered easy by noting the "pit," poison fangs and also the fact that the under scales of the tail are for the most part not double but extend entirely across as do the scales of the belly. The water moccasin grows to large size, often being five or six feet in length. It is a surly brute and is ready to strike on small provocation. The fangs are proportionately smaller and shorter than are those of a rattlesnake of the same size, but are capable of inflicting a dangerous and often a deadly thrust.

Our other moccasin (*Agkistrodon mokasen*) is known by a number of common names dependent upon the locality in which it is found. Perhaps in the low lands of Georgia it is most commonly called the "highland moccasin" to distinguish it from its cousin the water moccasin, but in the hill country it is more frequently known as the copperhead or pilot snake while some other of its aliases are chunkhead, deaf adder and poplar leaf. Slendered and generally smaller than *A. piscivorus* it is quite gaudily colored, usually having a ground color of yellowish cast upon which are large, irregular blotches of chocolate hue. The young have a bright, sulphur colored tail and, as is the case with the new born of all of the pit vipers, are capable of inflicting a dangerous wound so soon as they have come into the light.

From the foregoing it will be seen that we have three rattlesnakes and two moccasins within our borders all of them belonging to that class known as Pit Vipers. The other poisonous serpent which we have will be mentioned later.

The venom of the pit vipers while differing somewhat with the various species may, for our purposes, be considered as identical. In a recent article Githens and Butz have shown the following probable dose of poison from the initial bite of the following species:

C. adamanteus 150 mgm. C. horridus 45 mgm. A. mokasen 25 mgm. A. piscivorus 60 mgm. The basis for these figures is, of course, from adult specimens of the various species. Such computation gives a rough estimate of the severity of symptoms to be expected in a case where the variety and size of the snake inflicting the bite is known.

There are, however, several other important factors which will readily occur to you, namely the situation of the wound and whether or not the fangs have penetrated a vein and the poison thus been thrown directly into the circulation or the poison has been injected into some part about which a ligature can not be thrown. I know of one case in which a woman while stooping in the act of picking berries was struck in the buttocks by a large *C. adamantius*. Death resulted within half an hour. Bites upon the arm or thigh are more dangerous than those upon the foot or hand.

The Treatment of Snake Bite

The poison of our pit vipers, while it differs slightly in the various species, may, for

practical purposes be considered as identical in potency and effects.

It is a complex body consisting of Neurotoxin, hemorrhagin, hemolysin and other principles.

Symptoms: Following the bite of one of the Pit Vipers there is instant pain followed by swelling of the part, nausea, vomiting, depression and cold, clammy skin. In severe cases convulsions may occur. The pulse rate is accelerated and heart action enfeebled. Due to the hemolytic action of the venom there is usually bleeding from the fang wounds.

Treatment: Most bites occur in the extremities, upon the hand or forearm or the foot and leg. A ligature of some sort should immediately be placed above the wound and tightened sufficiently to materially retard the circulation. While a rubber turniquet is desirable it is rarely the case that one would be at hand. A piece of stout cord, a twisted piece of cloth or some similar makeshift must be used without delay as time is a great factor. Our endeavor is, of course, directed toward keeping the venom from the general circulation. Unfortunately it is not possible to keep the ligature constantly tightened as death and gangrene of the part would result. It must be loosened every ten or fifteen minutes for at least thirty seconds in order to allow fresh blood to flow into the distal part. If ANTIVENIN is at hand it should now be used in accordance with the directions that come with each package. ANTIVENIN is a serum globulin. I am indebted to the Antivenin Institute of America for the following interesting account of the methods of its preparation.

"The method of preparing Diphtheria Antitoxin, as described in textbooks like Kolmer's Infection, Immunity, and Biologic Therapy, is in a general way, the same as the method of preparing Antivenin, the difference being that in the preparation of Antivenin, the snake venom is the antigen used. The following summary is based on official data submitted to the U. S. Public Health Service in our application for license for this serum and on information supplied to the Council on Pharmacy and Chemistry of The American Medical Association.

In the first place, horses are immunized with the venom of the Texas Rattler (Crotalus Atrox), this venom making up about 75 per cent of the antigenic solution used. The other 25 per cent is made up of Copperhead and Cottonmouth Moccasin venoms of equal parts. The horses for immunization are selected after examination to prove them to be in healthy condition, free from tuberculosis and glanders. These horses are treated throughout the course of immunization with the 500 unit dose of Tetanus Antitoxin every two weeks as a matter of precaution and protection against tetanus.

The preparation of the venom for injection is the following: The dessicated venom is made up in solution. If the venom has not previously been purified by centrifuging it is then centrifuged. The clear liquid thus obtained is then prepared for injection. A venom solution in glycerin and normal saline is prepared and diluted, under sterile conditions, in variable amounts of saline solution, so as to reach the concentration desired. These solutions are tested for sterility. The horses are injected subcutaneously in the side of the neck.

The range of immunizing injections begin with a dose containing about 0.4 mgm. of venom, and is gradually and slowly increased until perhaps 400 mgm. of venom are given at one dose. In other words, until a horse can withstand 1,000 times as much at one injection as the initial dose. The immunization to venoms is rather severe and tends to render the animals more susceptible to intercurrent infections which must be guarded against. The doses are given twice a week as a rule, and the treatment covers a period of from six to nine months. The antitoxic value of the serum is determined by trial bleedings. A small amount of blood is withdrawn and allowed to clot. The serum is drawn off and tested for its protective value, using pigeons as the test animals. If the protective value appears high within 10 days after the last injection the horse is bled. Minimum bleeding, 6 liters, maximum, 9 liters. The bleeding may be repeated after rest intervals of 10 days or more, until four to six bleedings are obtained, after which the horse is either bled out or given a rest period, followed by another short course of immuniz-

ing injections and another period of bleeding.

When the bleedings are done the blood is drawn directly into a sodium citrate solution. After clotting and separation of the serum, plasma is drawn off by suction. 0.5 per cent phenol is added as a preservative immediately.

The plasma is diluted with one-half its volume of water and a saturated solution of ammonium sulphate is added up to 50 per cent of the volume of the diluted plasma. The mixture is then heated to 60° C., and filtered through filter paper. The precipitate collected on the filter paper is re-dissolved in saturated sodium chloride solution and again filtered. The filtrate is collected, and to this 0.25 per cent glacial acetic acid solution is added. The precipitate thus formed is collected and pressed between filter paper and then dialyzed with running water for five days to remove traces of acetic acid. The final product is a serum globulin, which is tested for its freedom from sulphate and for its total solids and tonicity. The product is dissolved in sterile salt solution, filtered through Berkefeld filters, and the sterile product filled into sterile containers.

Potency is determined by tests on pigeons, guinea pigs and mice, and sometimes other laboratory animals. The minimum standard for our North American Anti-Snake-Bite Serum is that 1 cc must neutralize at least 2 mgm. of the venoms used in producing it. We are now putting out a serum of over 3 mgm, potency per cc. The test for potency has been described as follows: 1 cc of serum is put into each of a series of test tubes. To this is added variable amounts of a standard venom solution. These are mixed with the fixed amount of serum. Saline solution is added to make up a volume of 2 cc in each tube. After incubation at 37° for one-half hour the contents of each tube is injected intravenously into normal adult pigeons. One or two control birds receive only one M. L. D. of standard venom. The maximum amount of venom that 1 cc of serum will neutralize, as shown by pigeons which survive, is taken as the titre of the serum."

It will be seen that we have in Antivenin an analog of Diphtheria Antitoxin. As pointed out in the circular accompanying each package of Antivenin the dosage must be in proportion to the severity of the case and the body weight of the victim. Children require a larger amount of the antitoxin than do adults because the body resistance is much less than in the adult. As in diphtheria the danger is from under treatment rather than over treatment. In severe cases the Antivenin should be injected directly into the blood stream.

It is evident that the early use of Antivenin is desirable and will produce the best result. But even after the lapse of twenty-four hours this agent may prove of great benefit. It should, if possible, be used in all bites by one of the Pit Vipers.

Even if Antivenin is at hand it is well to employ incision and suction. Dudley Jackson and Col. M. L. Crimmins have carried on a series of interesting and instructive experiments with animals which seem to show conclusively that suction properly applied is an important factor in elimination of the poison in snake bite.

They advocate not only incision at the point of the fang puncture but over the immediate areas contigious to the wounds.

They advise a series of cross cuts one fourth by one fourth inches embracing the fang wounds and numerous similar cuts over the swollen area in their vicinity. They also advocate a series of similar cuts encircling the wounded limb though within the border of the limit of swelling. To all of these cuts they apply suction for one half hour with the purpose of drawing out poisonous serum. For suction they employ a rubber bulb having a small cup as may be made with a metal ear speculum. A breast pump may be of service on surfaces large enough for its use but of course it cannot be employed on fingers or other narrow areas.

Antivenin is employed to counteract such poison as reaches the general circulation.

According to the Antivenin Institute the use of permanganate of potassium is contraindicated as it is inert and if employed in strong solution tends to produce death and sloughing of the tissues. Jackson and Crimmins agree with this dictum.

For a failing heart strychnia is indicated

or whiskey may be used but only in SMALL AMOUNTS. It will be readily seen that it is unwise to employ a heart stimulant if it may be avoided as this tends to distribute the poison in the general circulation.

It is needless to tell this audience that all popular remedies are of no avail. We have to deal with a specific poison and our aim must be to keep it from the general circulation, so far as it is possible, and to neutralize such as may reach the general blood stream.

The Coral Snakes

The older writers placed the coral snakes in the genus *fulvius* but now they are classed in the genus *micrurus*. They belong to the family of cobras, those hooded terrors of India. They differ materially from the Pit Vipers in that the poison fangs are small and fixed in the jaw and the snake literally bites its victim, holding on with a firm grasp and advancing its fangs with a chewing motion so that several punctures are made and poison injected in each. In the United States there are two species of this genus. Only one of these, *Micrurus fluvius*, is found in the eastern states. It has quite a wide range, being found in all of the South Atlantic States from Virginia downward, in the Gulf States and Texas.

No Antivenin effective in a bite from a coral snake is available in this country—that made by the use of Pit Viper venom being useless except in wounds from serpents of this class.

Micrurus fulvius — is a small, slender, bright colored serpent, the adult form being no more than the size of the finger and about eighteen (18) inches or two feet in length. Its general color is reddish with jet black rings bordered by narrower yellow rings. Several species of harmless serpents mimic the coral snakes but none of these has the black band bordered by two yellow bands.

Ths serpent glories in a number of common names. In various localities it is called Coral snake, Harlequin snake, Garter snake, American Cobra or Candy snake.

Subterranean in habit, it is found under logs or plowed up in the field. Its food is probably other small snakes and lizards. Due to its rarity, habits, and the fact that often it may be handled with impunity, for it seems loath to bite unless treated roughly, reports of bites from this reptile are comparatively few. It is, however, deadly enough and a considerable number of reports of serious and often fatal bites from this snake are on record.

Discussion as to its poisonous qualities has doubtless arisen from the fact that persons have been bitten by some of the non-poisonous serpents which mimic in coloration the *M. fulvius*, in which case, of course, no serious results would follow.

In the southern part of Georgia and in Florida *M. fulvius* is fairly common. Much remains to be learned as to the life habits of this species and observations relative thereto should be reported. Fortunately it is not often that it is possible to report a case of poisoning of a human being by this beautiful though deadly serpent.

REFERENCES

Smithsonian Institute. Report 1898.
Poisonous Snakes of North America—Stejneger.
Reptiles of the World—Ditmars.
First Aid Treatment for Snakebites—Jackson and Crimmins.

THE CHALLENGE OF INDUSTRY TO PRESENT DAY MEDICINE*

C. W. ROBERTS, M.D.
Atlanta

If one might paraphrase a famous saying with respect to empires, the modern version would read southward the course of industry takes its way. A favorable year-round climate, proximity to raw materials permitting an appreciable saving in transportation charges, rich mineral deposits and an awakening initiative on the part of southern business men has logically arrested the attention of the captains of industry, with the result that the proverbially agricultural south, already moving toward economic independence through crop diversification, now looms as the fastest growing industrial section of the nation.

That this statement represents more than the idle boast of a partisian is attested by the deliberate opinion of journalists and statisticans alike, interested only in the chronicling of cold uncontrovertable facts. For instance, in a single year, 1927, the agricultural south

*Read before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

produced one fourth of the new wealth of the nation distributed as follows: Manufactured products twelve million, agricultural five million, mineral products three million. Georgia in the same year produced three times as much wealth from her factories as came from her farms. There is in prospect for the South not only a yearly repetition of this staggering sum pouring from the labor of a revitalized native population but an annual increase of five hundred sixty-seven million against an increase of two hundred seventy-nine million for the states of other sections combined. And this record disregards an inevitable growth as the south finds itself in possession of the necessary capitol to finance new industries the surface of which have only been scratched. The unerring percentage table shows southern manufacturing has increased 1560 per cent in forty years as compared with the gain of one thousand and two per cent by the remainder of the country in the same period of time. This increase moreover, is not at the expense of agricultural decline, for during the past twenty-eight years the value of southern agricultural products have increased two hundred forty per cent. Thus, in every line of economic endeavor, in commerce, finance, industry and agriculture statistics show an unparalleled regional development. We are confronted with new opportunities and a powerful instrument with which to build wealth which, although new and as yet hardly acclimated, has already shown its unmeasurable potentialities as an instrument with which the south may soon regain its prewar financial status. Let it suffice to say that we are now in the midst of an industrial era which challenges us to meet the newer responsibilities which its higher competitive nature imposes. That natural advantages and an increasing vision and wealth alone will not continue to furnish the all sufficient urge required to keep industries' course headed southward should be self evident. Indeed, it has often been argued, and I think with prudence, that the native born southern laborer, free from the taint of oriental paternalism, nurtured in an atmosphere of fair play and accustomed to labor free from many of the faults of over-organization, has been a strong factor in crystalizing decisions in favor of the south for factory expansion. It is devoutly to be hoped that this consideration has been a foremost one and even more desirable that the compliment thus paid the traditional fair-mindedness of the southern working man may be deserved and expanded. I quote from the presidential address of the late Dr. Edward G. Jones delivered in this city in 1920, which expresses a sentiment worthy of our southern ideals and appropriate to the type of development now unfolding in our midst. "Standing as we are today at the threshold of a future where oracles are dumb and inspiration powerless to wing its flight, a future beset by gravest problems and uncertain as never before, it seems to me that to foster moral citizenship and genuine Americanism has come to be the peculiar function and opportunity of the south, an opportunity which I am sure it will discredit us to neglect and which I am equally sure it will distinguish us to embrace."

It is a strange though heartening condition which permits a discussion of the morals of working men in relation to employment. Some eight years of rather intimate study of the factors interfering with cordial relations between employer and employee in Georgia, has led me to the fixed conviction that a low moral tone is one of the most serious stumbling blocks to be combatted. And this applies to white and colored alike. A sense of fair play is essential. Though possessed to a degree comparable to the average American workman, may we not hope that southern factories will be manned by a working personnel excelling in this virtue and thus always willing to give a day's work for a day's wage and desiring ought but common equity when questions between capital and labor are raised.

But it is not of the attribute of moral fitness in the workman that I desire primarily to speak. I direct your attention to his physical ability to work and to work efficiently and continuously. The modern factory requires a trained personnel and for the best results from the standpoint of production and profits, must avoid frequent labor turnover. The "off and on man" whose employment is frequently interrupted by sickness or the injudicious yield to the call of the stream

or the chase hinders rather than aids the production program. In recognition of this pitfall industry has boldly announced that its chief business is the making of men through measures designed to build up a sturdy and contented working class. Whether this sentiment in big business represents the giving of primacy to the human and spiritual as opposed to the material values, now so much in evidence in civic clubs and similar organizations for the advancement of human relations—a sort of taking of the old time religion into partnership with business—or whether it has been found that the physical status of the employee is reflected in the profit and loss account of business may be open to some argument. The fact remains, however, that the modern factory proposes that its employees be physically strong, free from latent disease, unhampered by remedial physical handicaps, that they be well housed, well clothed, given the advantage of schools, churches, clubs and that within their means they be encouraged to enjoy some of the luxuries of life. In a word modern business is moving toward a cultural more than a living wage. They have recognized that those who hold economic control over toilers transmit not alone their virtues but vices as well. Industry then, and may we not wish to see southern industry excel in this particular also, must move forward upon the further application of two great social principles. The imposition of the least physical burden consistent with necessity upon the workman, and the wider recognition of the fact that the employee is a trust to develop and surround with the blessings of science rather than a chattel to exploit in the ruthless dash after selfish wealth. The solid ground upon which future business must build its permanent edifice will be strengthened not by further pressing down the yoke upon the neck of the ignorant, suspicious working class, but by their elevation through adequate wage and humane treatment to the status of economic and mental independence.

The enactment of the workmen's compensation laws is a gesture in the right direction. Such legislation cannot be considered paternalistic. The basic principle upon which they rest recognizes that the wear and tear of the human element in industry represents a legitimate charge to be taken in account along with other production costs in fixing the selling price to the consumer. To be sure, the ultimate aim is to prevent rather than attempt to repair injuries and other unnecessary drains upon the earning power of the working man. In the meantime if wear on machinery, interest in invested capital, rents, power charges and the like are factors to be set against the production cost of a pair of shoes, the exhaustion of brain and brawn on the part of the laborer deserves like consideration. But such laws, now operative in every state of the union with the exception of South Carolina, Florida and Mississippi, only partially compensate the workman for lost time and permanent handicap resulting from the accidents of industry. Labor bears its just share of cost, compensation benefits being limited to medical care and about half of weekly wages during the period of lost earning power as a result of accident. Surely such legislation deserves the support and hearty cooperation of the medical profession. These laws are theoretically just and equitable. It is reasonable to anticipate a broadening of their scope to include occupational diseases. Such concept fits in with the new task set for itself by industry as interest swings toward human development as its basic task.

So far as Georgia is concerned, our law passed in 1921 has been administered by a wise and conscientious commission which has striven from the outset to interpret the law with meticulous attention to its spirit and purpose with due regard always to the broader aspects of equity. Convinced from the outset that the provisions of the act in common with those generally in operation, anticipated the free use of sound medical opinion in its administration, the Georgia Commission has constantly availed itself of the services of our profession in rendering of awards concerned with medico-legal questions. Whatever criticism, if any, that might be justly lodged against the lay administrators of these acts, concerned so much with medical problems, in other states, cannot with equity be maintained in Georgia. It should be and I feel is a matter of general felicitation of our commission that they established in the outset, a medical

policy the purposes of which are entirely in keeping with those recently announced as acceptable to the research group appointed by the American College of Surgeons to report on the status of traumatic surgery in the United States.

The essential relation of the medical profession to this new concept of duty on the part of industry as well as its traditional interest in the elevation of the standard of living and the capacity to enjoy a more abundant life through improved mental and physical status, long accepted as within its legitimate sphere, has given birth to the challenge implied in the title of this address. Industry calls us to take stock of the physical status of the Georgia laborer. With the phenomenal expanse of industry in our state has arisen certain problems coming as it were as by-products of industrial demands upon our workmen. Outstanding among these are the wounds of industry, the primary concern of the industrial surgeon and the question of latent disease which looms as a tremendous problem from the standpoint of cost for rehabilitation as well as the most frequent factor responsible for excessive loss of time and general lack of efficiency. The percentage of latent disease in any general group of our native white population taken in New York, for example, does not vary appreciably from a similar group taken in Georgia or in California; but the negro laborers of the south and other groups composed of the ignorant foreign born do present a much higher percentage of physical defects. It is the colored laborer of the south and the group sometimes spoken of as "poor white trash" that runs our general average upward. For instance, syphilis has been found to affect about one third of the colored patients admitted to the Grady Hospital of Atlanta without regard to the condition for which they were admitted. That is to say, syphilis is found as a complication on routine examination of one-third of admittances. Heart disease, blood vessel disorders, lung affections, various focal infections principally in the throat and the intestinal tract, and disorders of the nervous system falling under the head of lowered nerve stability, make up the roster of common findings in both races. Nor would I have you to understand that the appearance of latent disease is confined to patients admitted to the charity hospital of Atlanta. The experience of medical men in office and private hospital practice reveals the same high ratio excepting only the question of syphilis. Examiners in our public schools, county health officers, industrial physicians connected with big corporations, health-extension bureaus, medical departments of life insurance companies—all tell the same story.

Of special interest, perhaps, is the data concerning defects which caused rejection for military service among young men from 21 to 31 years of age during the World War. These men, be it remembered, were supposed to represent the "flower" of our country and surely were freer from physical defects than any other age group that might have been examined. Notwithstanding their preferential status out of 467,694 rejections the following percentages and causes appear:

Bone and joint diseases	12%
Eye affections	10
Heart and blood vessel disease	13
Mental disturbances	5
Lung conditions	10
Genito-urinary disease	3
Flat foot	3
Hernia	6
Nerve disorders	5
Carious teeth	3

These young men were drawn from the nation as a whole and give a graphic picture of submerged disease in a choice group of our population. Think of 12 out of 100 men with bone and joint disease, of 13 to the 100 with lung affections, 6 with hernia, 3 with carious teeth and so on. Let it be borne in mind that all these diseases were producing symptoms such as would interfere with ordinary efficiency.

Now multiply these averages manyfold when older groups are considered, and the fact becomes inescapable that one injured man out of three hurt is potentially subjected to an extended period of disability on account of aggravation of his latest disease. This conclusion becomes more impressive following the examination of a group of three hundred records of workmen applying to the Industrial Commission because of dis-

ability growing out of accident and taken at random from my files which show the following points: 157 of the three hundred showed positive evidence of latent disease distributed as follows: Neurosis 13, focal toxemia 79, heart and blood vessel disease 11, hernia 7, venereal 10 and rheumatism 37.

Neither are we justified in attempting to shift the burden of relief from this major factor influencing disability periods to the shoulders of the working man. His status in life including the level of health is not his own design. If ignorance of the laws of hygiene have contributed to it, the Government must accept its rightful blame. If inheritance renders him less unfit than his neighbor to stand the stress and strain of unfortunate circumstances, a sense of charity dictates that we pity rather than censure. If environment has warped the woof of his moral nature so that the will to carry on so long as there is physical endurance within the limits of safe self preservation is lost, a carping attitude of unsympathetic understanding will not furnish the vision which sees under the handicap and behold the chilling atmosphere in which his moral nature has been nurtured. It must therefore, be obvious that until the cherished day comes when men shall be free from the crippling influences of insidious disease, the liability of inherited perils, and the damning handicaps of a low moral make-up, we shall have to accept these attributes in no mean proportion among those making up the so-called working class and continue to witness their unsavory influence over the course common to the experience of normal individuals following injury.

The right of every man to work must continue to be recognized. Examination before employment for the purpose of finding remediable defects is a commendable venture of industry provided the necessary interest is furnished looking to constructive relief. For the purpose of separating the fit from the unfit—a compensation law which functions so as further to harass by refusal of employment an already heavily burdened class of society would deserve and, I doubt not, receive the hearty condemnation of all those who have correctly interpreted the spirit and purpose of such legislation. The burdens of the weak must continue to be borne by the strong and the employers of labor must not be encouraged to discriminate against a social class whose activities have been limited by influences beyond their control.

The principle of acceptance of the workman as he stands when employed will probably prevail. Excepting only instances of fraud and willful malingering and cases presenting wide variations from the average, an injury which sets up, activates, brings to the attention of the workmen latest disease, or otherwise changes a man's earning his livelihood in spite of potential disease to one who falters by the way and lies temporarily the victim of a slight injury, should be given the same consideration as though disability resulted from injuries in the more palpable class. Indeed, here the administrators of compensation laws might recognize their opportunity and, by diligence in their demands for careful measures of rehabilitating, return to industry a class who, contrary to the group the personnel of which is composed of more sturdy members, may be even benefited by the misfortunes of accident. Certainly no rule of thumb will ever be suited to the equitable adjudication of cases falling into the class whose extended disability has resulted from the aggravation of pre-existing disease.

But this serious situation appalling as it is must have a remedy. The cost of rehabilitation of the potentially sick people of our state should not be imposed upon industry. It is a responsibility of the commonwealth. The best medical thought amongst us must be given to its solution. If we persist in withholding active leadership we cannot complain if the state steps into the breach nor longer malign adjusters for insurance companies who employ interested doctors of questionable prominence rather than refer injured employees to better men manifesting only slight concern, if not outright hostility. With these startling facts before us shall we be content to answer industry's challenge by reference to past achievements? With pardonable pride we can point to a long and victorious professional history. Its pages are illumined by conquests of pestilence after which armies have moved to victory, great

canals opened from ocean to ocean and new empires arisen from the ashes of the old. The simple story unembellished connects our past with every forward step of mankind. We are willing to leave an assessment of its worth to the unbiased opinion of mankind. Neither is it assumed that any defense of its present position is urgently demanded. We are willing, however, for the sake of argument to accept the apparent indictment in order that responsibility may be fixed and remedial measures discovered.

We are ready, also to move forward to a new conquest rather than content ourselves with a past rich in tradition and achievement. With characteristic response the profession announces its re-dedication to the fundamental purpose of medical education—the development and preservation of well-rounded manhood physically equipped to bear the stress of useful endeavor and a body fit to house the necessary moral and ethical nature to harmonize with its environment.

The doctor readily accepts responsibility for a peculiar citizenship occasioned by his particular training. We, as an organized profession, are directly responsible for the protection of the rights of Georgia's citizens, concerning matters of health legislation not to mention the chagrin we should feel at the laws which have been enacted giving a legal excuse for the operation of charlatans. Our people need more than anything else sound bodies and active minds. What profiteth it a man to ride smoothly over inviting Georgia boulevards, breathing invigorating ozone to the rhythmic music of a high powered limousine, if he be shaken to death at night by malarial chills—or having subsisted on the wholesome milk of registered cattle and exquisitely flavored country-cured ham secured from blue-ribboned swine, he suffer the erstwhile ruddy cheek reduced to an ashen pallor by the insidious ravages of hook-worm disease. Emphasis of State Government on the construction of good roads and on cattle and swine husbandry is to be encouraged, and we of the medical profession will lend the full weight of our influence, in this direction. But is it not time to consider first the health of our citizens for whom all these things must be regarded as subservient? When our people are sick or threatened by epidemic or disabled by accident or rendered inefficient by distortion of mind, no false prophet of newfound doctrines of health will be found adequate to meet the situation. Past emergencies of this nature and countless sufferers brought back by the tender and faithful administrations of the regular practitioner of medicine in Georgia, attest the efficiency of the old school. Then why the spread of nostrum and charlatan? Has it come up to meet the need in Georgia? Rather has it not grown because we have not led the way to better things by supporting legislators who were committed to a program of Health Education. Have we as doctor and doctor's wives concerned ourselves with legislation in Georgia affecting our own rights and those of the people under our immediate care? Are we familiar with the statutes in the code of Georgia whereby charlatans are encouraged to come to Georgia as a profitable field for operation? Unless we, whose duty it is, respond to the urgent demands of our time for men who will challenge the right of those moved by unworthy motives in medicine, who shall lead the fight for measures that will safeguard our people, and what group of Georgians will offer to mould sentiment in our profession which will drive from amongst us those who would debase a holy calling by its prostitution of the ranks of the trade.

Argument is not needed. Eloquence is impotent. Plain words must be spoken. Indifference and lethargy has choked the noble sentiment of our members. We have lived too much unto ourselves and drawn our limiting horizon too closely about us. Citizens of Georgia, this appeal is for a re-dedication of time and talent to the growth of our profession and through its ministries will come increasing benefits. We have the potential power to shape legislation in Georgia and the call is now made to you that we stand together for the preservation of the tenets of the most glorious profession on earth and for the translation of its benefits into an intensified service to the people of our state. They are entitled to the best medical service scientific effort has produced, and more, they must have an equal chance to compete with

others as they strive to rise above physical and economic handicap.

Success in life and achievement in any vocation depends upon mental alertness. To begin the race of life with mental or physical handicap places a serious barrier in the pathway. Even physical prowess must be directed by a keen and discriminating mentality. Thus the athlete, whether on the gridiron, the diamond, in the squared ring or on the track, fails to win in the highest measure, unless his trained muscles are directed by a mentality which takes advantage of all the breaks in the game.

If it is accepted that the world's progress has depended upon the transmission of information from one race to another, if progress follows where people are capable of being taught, it must be apparent that healthy people are more teachable than those hampered by mental or physical defect or those torn by strife and distrust in personality.

The criminal annals of the world are filled with statistics which clearly suggest that violators of the law are almost entirely sufferers from disease of some nature. It has always been hard for sick people to be good. Sickness breeds distrust, suspicion and willingness to violate the law. Unhealthy people are less law-abiding.

It must follow, therefore, that the future life and achievement of our citizens is largely dependent upon physical, spiritual and mental manhood. Poverty paralyzes the wheels of industry and physical poverty is the great epidemic which feeds into the commonwealth a high percentage of its indolent citizens. Poverty is to be resented with a holy disgust. It strips the individual of incentive and lays heavy burdens on his progress. Good health is the most effective weapon against this monster destroyer of the hopes and ambitions of people everywhere. First sound bodies and then growing bank accounts.

Unhealthy people are hard to teach. Moreover, they stand in the way of those who, possessing strong minds and bodies march in the van of progress. Large sums of public school funds are lost by attempts to teach irresponsive sick children. Public monies are thus wasted. The remedy is the giving of thought to the physical body, which, when applied and corrective measures instituted, not only makes it possible to reclaim an individual who otherwise struggles against insurmountable difficulty but at the same time clears the stage so as to permit more favored pupils to advance more rapidly.

Courts, Houses of Correction, Juvenile Homes for Incorrigibles, large police forces would find far less work to do if our population was healthy. Such institutions made necessary by the violation of law, causes a heavy drain on public funds and thus diverts from constructive enterprises monies which might be used for more effective service to the people. Here again the remedy against crime is giving thought first, to the health development of our children. First the physical machine and then the super structure. A house, if built upon the sand, will not stand.

Health education does pay. Sick people are less efficient, are less teachable, are less law-abiding. Health education improves the economic welfare of a nation, state or city, maintains a constant barrage against poverty, saves the people taxes by eliminating wasted investment in efforts to teach the sick and underprivileged in the same school with the physically fit. It pays immediate dividends by offering a method of reclaiming enormous court costs made necessary in the effort to control the menace against society brought about largely by the conduct of the irresponsible group, a class fettered by physical handicap and thus made vulnerable to the onslaughts of vice.

Is it not time to recognize that we are living in a new world? Progress is dependent upon building on a healthy foundation. Thoughtful students of the welfare of humanity are ready to agree with Public Health Workers that many ills to which humanity is subjected, can be corrected. It is the duty of all forward-looking citizens to give sympathetic hearing and active cooperation in the effort to discover and correct physical conditions which have for so long impeded progress but should now be outlawed. People are not necessarily the victims of disease. The Science of Public Health and Preventive Medicine has clearly marked the pathway. If we will but walk therein our rewards will quickly become manifest. Ignore the truths

of Preventive Medicine and as a race or individual we fall.

Reference to the best method of procedure to obtain the improvements desired raises a controversial point. Some well-meaning and sound thinking members of our Society advocate a policy of non-interference, believing that public necessity will eventually bring the necessary remedy. These likewise refuse to embrace the political program used by cults, namely, legislative influence obtained by a group of advocates trained in methods of political expediency and innuendo, believing that such ill gotten legislation yields no lasting results. It is the aristocracy in medicine refusing to bend the knee to modern legislative methds.

All those who serve on our Society's legislative committee, while yielding to no one with regard to their allegiance to medical ideals, are immediately confronted with a situation in legislative circles in which questions are not settled upon their merit or after the logic of the idealistically inclined. The legislative mind is shaped and fashioned by certain so-called leaders whose endorsement of a measure makes it good and whose objection makes it bad. These leaders block legislation when their viewpoint is likely to be endangered on the floor. They are courteous to your Society's legislative committee, affecting an interest in the cause they espouse, but either wilfully or because of pressure by the proponents of other measures whose advocates offer a more aggressive and commanding front, allow medical legislation to die in committee rooms or to slowly expire on the inactive and oft-padded calendars.

In the halls of the legislature, the doctor is under the necessity of pitting his wits against an opponent trained in the business of writing and passing laws. In this pitable dilemma with legislative lamps untrimmed and hedged about by medical ideals which limit such initiative as might overcome obstacles, he sees his well-meaning efforts come to naught.

And now to the crux of the whole matter. Shall "we fight the devil" with his own weapon or sit at the feet of the Georgia legislature asking in the name of Georgians medical alms for her citizens? Shall we play the game of politics or rest on an aristocracy in medicine which cures no legislative ills? Again united we may achieve—but divided we become pawns in the hands of those who look upon the practice of the healing art as an opportunity under the state's protection for the exploitation of its citizens' frailties. To the preservation of an opposite sentiment which has always sought to find and eradicate the cause of physical decay and which attribute alone has justified the survival of the great orthodox medical profession, let us cling with unabated enthusiasm. But is it not time that we yield to the urge of a righteous wrath to the end that we may secure such legislation as will adequately support the program of expansion of our State Board of Health, the one agency in our state that has for its sole task the correction of the very ills herein depicted. If dress suit methods fail us, and they have, shall we longer hesitate to stoop a little if in bending we may conquer in the name of Georgia's potentially sick citizens?

We welcome to our ranks the strong arm of big business in Georgia. May we not hope that their support will furnish the reinforcements that our feeble columns have so long needed?

In conclusion I bid you vanish for the moment every vagrant distraction which might crowd from your hearing the clear song of industry carried in every stirring breeze from the orchards of Habersham to the cotton field dotting our southern lowlands. Its lyric is the spontaneous outburst of an awakening industrial life. Its words are those of the frugal poet of Scotland, the ever popular Bobby Burns. "To catch Dame Fortune's golden smile assiduously wait upon her and gather gear by every wile that is justified by honor. Not for to hide it in a hedge, not for a trained attendant, but for the glorious privilege of being independent." To the lesson in this song our profession answers with a lusty, amen. We, too, want a happy, thrifty people free from the enslaving chains of poverty. And more, we would desire for them unleased initiative, active minds, strong bodies, unwavering moral standards. This, indeed, will furnish a citi-

zenship ready and able to man our factories and to till our fertile soil. But even more than this we yearn for a people whose leisure may be devoted to the enjoyment of the cultural things of life now happily becoming increasingly evident amongst us. Music and art and literature and wholesome play, these are part of an abundant life, the birthright of every Georgia citizen. The profession to which we give allegiance drives to no lesser goal. We accept then the challenge of industry and bid them fight with us against our common enemies and march with us toward a common goal—economic independence and universal good health. We join in industry's song with a counter challenge and propose the inspiring words of Lowell as prophetic of our united purpose. "New occasions teach new duties, time makes ancient good uncouth, they must upward still and onward who would keep abreast of truth. Low before us gleams her camp fires, we ourselves must pilgrims be, launch our Mayflower and steer boldly through the desperate sea, nor attempt the future's portal with the past's bloodrusty key."

Yes, industry, we have caught your challenge, "if ye break faith we shall not sleep," though factories flourish.

KAHN AND WASSERMANN TESTS

III. Studies On the Comparative Results Obtained By the Kahn and Wassermann Technique

PAUL EATON, M.D.,
FRED L. DAMREN, B.S.,
Augusta

The advantages of the Kahn test over the Wassermann test are so great, from a technical standpoint, that it remains only to prove its actual specificity to bring about its general substitution for the latter. On the other hand, the Wassermann test has played such an important role in medicine and is so firmly intrenched with the profession at large, that we must be exceedingly sure of our ground before making any such move. We have, in our laboratory, since February, 1927, been applying both tests to each sample of blood submitted in sufficient quantity for the purpose. In doing the Wassermann test, we use two antigens (a) a cholesterinized alcoholic extract of human heart, with fixation in the water bath; (b) an acetone insoluble antigen with fixation in the ice box. In another paper (1) we have published the comparative results obtained by these two methods. While there is some disagreement, the correlation in general is very high.

In comparing the results obtained by the use of the Kahn test with the Wasserman results, we offer three tables. First, we have compared the Kahn results with the averages of the Wassermann tests; that is to say, with the Wassermann results as reported. Then we have compared the Kahn results with the two Wassermann antigens separately. For the purpose of this paper, we will introduce the results obtained in an inverse order, that is to say, first the correlation between the results obtained in the Kahn test and those given by the cholesterinized antigen. These results are given in Table I.

Table I

November, 1926, to October, 1927, inclusive.

Correlation between Cholesterinized antigen and Kahn test

KAHN	=	+	2	3	4	Total
=	(3998)	31	35	34	27	4125
+	31	(22)	4	8	6	71
2	49	9	(37)	5	26	126
3	47	7	5	(35)	9	103
4	95	25	30	65	(838)	1053
T	4220	94	111	147	906	5478

Absolute Checks	4930	89.99%
Practical Checks	5089	92.89%
Wassermann reading higher	185	3.37%
Kahn reading higher	363	6.62%
Excluding Practical Checks		
Wassermann reading higher	136	2.48%
Kahn reading higher	253	4.63%

In making this up, we have lumped plus=minus reactions with the negative both for Wassermann and Kahn tests, for the purpose of simplifying the table. We do not believe that a plus=minus reaction amounts to a great deal, although in our routine work, we make constant use of it.

It will be observed that this table presents the results obtained by the use of these two tests with 5,478 specimens of blood. In 4,930 instances there was perfect agreement between the two tests, and in 5,089 instances

there was practical agreement. By practical agreement we mean that there was a difference not greater than one plus=sign between the readings given by the two tests on any particular sample. If, for example, the Wassermann reading was two plus and the Kahn reading either one or three plus, or the other way round, we assume that there is a practical agreement. In 363 instances the Kahn reading was higher than the Wassermann, and in 185 instances, the opposite was true. If, however, from these latter figures be subtracted those we just referred to as indicating practical agreement, we find that in 253 instances the Kahn reading was higher than the Wassermann and in 136 the Wassermann reading was higher than the Kahn. It will be noted that the numbers below the diagonal line of cells indicating perfect agreement are larger than those to the right and above that line. That is to say, the Kahn test has given us a larger number of positive readings than the Wesserman even when the latter was performed with a fortified antigen.

Table II

November, 1926, to October, 1927, inclusive

Correlation between Acetone Insoluble antigen and Kahn test

KAHN	=	+	2	3	4	Total
=	(4054)	13	12	15	31	4125
+	40	(22)	0	4	5	71
2	67	4	(29)	5	22	126
3	60	1	6	(30)	6	103
4	161	32	24	45	(791)	1053
T	4382	77	71	99	855	5478

Absolute checks	4926	89.92%
Practical Checks	5045	92.09%
Wassermann reading higher	113	2.06%
Kahn reading higher	440	8.03%
Excluding Practical Checks		
Wassermann reading higher	89	1.62%
Kahn reading higher	345	6.29%

Table II shows the relation between the Kahn results and Wassermann test results when the latter was performed with an acetone insoluble antigen.

In 4,926 instances there was perfect agreement, and in 5,045, practical agreement. In 440 instances the Kahn reading was higher than the Wassermann, and in 113 cases the opposite was true. Deducting as before those instances we have agreed to consider practical agreement, these figures become, Kahn reading higher than Wasserman, 345; Wassermann reading higher than Kahn, 89.

Table III

November, 1926, to October, 1927, inclusive.

Correlation between Averaged Wassermann results and Kahn test

KAHN	=	+	2	3	4	Total
=	(4002)	59	25	19	20	4125
+	29	(29)	4	5	4	71
2	56	13	(28)	8	22	127
3	51	6	9	(31)	6	103
4	105	44	54	64	(786)	1053
T	4243	151	120	127	838	5479

Absolute Checks	4875	88.99%
Practical Checks	5063	92.42%
Wassermann reading higher	170	3.10%
Kahn reading higher	433	7.90%
Excluding Practical Checks		
Wassermann reading higher	95	1.73%
Kahn reading higher	320	5.84%

Since the Wassermann results which we report are made up by averaging the results given by the two antigens, giving a slightly greater weight to the less sensitive antigen, it is to be expected, of course, that the correlation between these results and the Kahn

Table IV

	Kahn Chol. A. %	Kahn Av. Wass. %	Kahn Aceto Ins. %
Absolute Agreement	4930=90	4897=89	4926=90
Practical Agreement	5089=93	5056=92	5045=92
Wassermann reading higher	185= 3	170= 2	113= 2
Kahn reading higher	363= 7	433= 8	440= 8
(Excluding practical agreements)			
Wassermann reading higher	136= 2	95= 2	89= 2
Kahn reading higher	235= 5	320= 6	345= 6

results should be of an intermediate character. It is given in Table III.

In 4,875 instances there was perfect agreement, and in 5,063 instances, practical agreement. In 433 instances, the Kahn reading was higher, and in 170 cases the Wassermann. Deducting as before, the practical agreements, the latter figures become 320 and 95 respectively.

These agreements and differences are given in Table IV.

In another paper (2) we have described the disturbing effect upon the Wassermann test of excessive amounts of natural anti=sheep hemolysin, and called attention to the error which it may introduce. That is to say, to the fact that the Wassermann may

(Continued on Page 338)

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

JULY, 1929

ALLEN H. BUNCE, M.D., Editor
H. L. ROWE, Business Manager

Publication Committee

E. C. THRASH, M.D., Chairman
A. S. M. COLEMAN, M.D.
M. M. HEAD, M.D.

Articles are accepted for publication on condition that they are contributed solely to this Journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the State. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the State.

Reprints should be ordered within 30 days after the appearance of an article, since all type will be destroyed at the end of that time.

Editorial Department

THE TREATMENT OF THE DISEASE AND THE TREATMENT OF THE CASE

The average young graduate in medicine, about to embark upon his career, has been well trained in the treatment of diseases, but as yet has learned but little about the treatment of cases. The management of the disease includes what is taught in text-books concerning pneumonia, appendicitis, and the like, but the management of the case includes not only the disease, but also the patient, his family and his friends. The medical college curriculum cannot give a course in the best method of handling the patient, his family and his friends, although so much of the student's success in his profession depends upon it. Such a course, however, may be derived in a way from a well-supervised interneship in a hospital which cares for a large number of private patients.

Some men have an inborn, native tact which enables them to deal with men and women successfully under all circumstances, while others have gained such tact from close observation, or from careful training at home or elsewhere. The young physician who possesses no such accomplishment, and who has received all of his interne experience in a public hospital which has no provision for private patients, is apt to see his practice grow slowly, in spite of his efficiency in diagnosing and treating disease. Very often patients choose a man of inferior ability to treat them merely on account of his superior manners.

The ideal interneship would be one or two years in a large public hospital where disease can be seen and studied at its worst, and in the largest and most varied assortment, and then a year or two in an institution caring for the better class of private patients, for the polish it affords. On second thought, however, contact should be had with "nice" patients first. Not infrequently the more or less necessary rough manners acquired in handling the average patients found in charity hospitals are hard to live down, or may never be lived down entirely. It would be well to pass some of the gentleness and courtesy used with private patients to the benefit of those who are sick in the public wards. All patients, no matter whether rich or poor, cultured or not, should be given all the consideration possible.

The young doctor eager to achieve rapid success in his work soon will find that there is more to the practice of medicine than the diagnosis and treatment of disease. He cannot diagnose and treat unless he has patients, and he will not get and hold patients unless he employs kindness, gentleness and tact. A sincere, dignified demeanor should take precedence over flattery, hand-holding and back patting.

Whether we like it or not, we must yield to the patient's peculiarities at times, remembering that sick people do not always display their normal selves. Family and friends must be given a hearing, and their fancies heeded when not hurtful to the welfare of the patient. Impatience and anger must never be shown. Not only is the patient likely to be

abnormal in his ideas, but the same may be true of his family and friends.

By the happy combination of capability in the art and science of medicine, and the knowledge of human beings and how to handle them, not only will the physician prosper, as the world sees it, but he will render his fellow men the maximum of good service, which is his responsibility.

FRANK K. BOLAND, M.D.

THE CRAWFORD W. LONG MEMORIAL PRIZE

Several years ago a man vitally interested in the progress of medicine in Georgia offered as a stimulus to original work within the profession in this state, a prize valued at two hundred and fifty dollars. The conditions of the contest for this prize are very concise. The essay entered into the competition must contain original work. It must be read before the Medical Association of Georgia at its annual convention. Copies of it are then sent to the chairman of this committee, the committee studies the essays and renders its decision. The prize is presented at the annual banquet of the Association. During the past year the number of entrants for the prize were few. It is impossible to understand why the interest is not greater. Surely the men in the profession in Georgia are not slipping backward in the field of original work. It would be a great reflection on the membership of our Association if this prize should be withdrawn and there is no doubt but that it will be, unless greater interest is manifested in it.

I would earnestly urge you to consider preparing an essay on some original work that you have done and then present it at the 1930 convention in competition for this prize.

WM. R. DANCY, M. D.
Chairman.

MEDICAL RELIEF IN DISASTER

Leters were mailed to the presidents of constituent county societies on June 6th asking them to organize in each county a Committee on Medical Relief in Disaster as recommended by our President, Dr. William R. Dancy, and approved by the House of Delegates at the Macon meeting. On June 7th, Dr. G. Y. Moore, Secretary-Treasurer of Randolph County Medical Society, wrote Dr. Dancy that his suggestions had been carried out by the appointment and organization of a committee in Randolph County.

Our president in acknowledging the formal notice of organization, says: "It is both refreshing and pleasing to see the ready response of the young and active secretary of the Randolph County Medical Society to the request of the President of the Medical Association of Georgia for the organization of Medical Relief in Disaster. My most hearty congratulations on your prompt effectiveness in organizing the emergency squad of Randolph County for the purpose of Relief in Disaster."

NURSING SCHOOLS BEING GRADED

What significance has the early returns from the Committee on the Grading of Nursing Schools to our Georgia nursing situation?

2215 schools of nursing in the United States were approached for a self analysis to be taken May 12-19. By July 1, 1431 schoos had sent in their reports—an average of 65 per cent.

Georgia schools, however, did not do as well. Only 42 per cent of the 57 schools approached replied to the questionnaires sent them.

The report to schools on the self analysis is to be entirely confidential and sent only to persons authorized to receive same by the school itself. One year is to be given in which to improve any conditions, or strengthen any weakness found, when a second analysis is to be made and the grading made public.

How can hospitals expect to maintain accredited schools when they do not show sufficient interest to event attempt to cooperate in a reasonable plan to evaluate nurse training on a national basis, with a view to giving the patient in any hospital safe and intelligent care? Hospitals cannot blame any organization but their own for failing to secure students, nor expect to hold those now in training, when the results of their own

(Continued on Page 335)

WOMAN'S AUXILIARY
MEDICAL ASSOCIATION OF GEORGIA
OFFICERS

President—Mrs. Marion T. Benson, Atlanta.
President-elect—Mrs. Chas. C. Harrold, Macon.
1st Vice-President—Mrs. J. A. Selden, Macon.
2nd Vice-President—Mrs. H. D. Allen, Sr., Milledgeville.
3rd Vice-President—Mrs. J. A. Redfearn, Albany.
Recording Secretary—Mrs. Lee Howard, Savannah.
Corresponding Secretary—Mrs. W. H. Garrison, Clarkesville.
Treasurer—Mrs. Chas. E. Waits, Atlanta.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Editor—Mrs. C. W. Roberts, Atlanta.

DELEGATES TO A. M. A. (1930)

Mrs. William R. Dancy, Savannah.
Mrs. C. C. Hinton, Macon.

DELEGATES TO S. M. A., MIAMI

Mrs. J. Cox Wall, Eastman.
Mrs. Ralston Lattimore, Savannah.

ECHOES OF MEDICAL AUXILIARY OF GEORGIA

The fifth annual meeting of the Medical Auxiliary of Georgia, which convened at the Dempsey Hotel in Macon, contributed to those attending, a vast amount of information and inspiration. The keynote seemed to be cordial, sincere fellowship and efficient, busines-like management. From the reception on Tuesday evening until the last strains of music of the supper dance, the business and social affairs functioned smoothly and automatically.

Wednesday morning charming addresses of welcome and greetings were made by Mrs. J. L. King and Mrs. Walter D. Lamar of Macon and Dr. C. K. Sharp. The response was happily rendered by Mrs. Paul Holliday of Athens. The honor guests and delegates were then recognized and introduced.

A twelve o'clock breakfast was served, which was a gem of culinary art and mental exercise. The mental exercise was puzzling out rebuses representing what we hear most about—diseases. The place cards were toy telephones with our own numbers on them, which readily made us feel quite at home, although they did not ring a single time while we were eating. Unique favors of miniature hand-bags, filled with samples of medicine and toilet articles were at each place.

At intervals we had the pleasure of hearing our past presidents enumerate some of their experiences and the outstanding features of their administrations. A short, interesting address by Mrs. Morris Fishbein was given at this time.

The afternoon meeting consisted of reports of treasurer, committee and district chairmen, which were discussed and accepted. After the appointment of resolutions and nominating committees, we adjourned.

Cars were provided to take us out to "The Oaks" to a lovely tea given in honor of Mrs. Allen H. Bunce, President of the American Medical Auxiliary.

Wednesday evening, at the city auditorium, we had the pleasure of hearing addresses by some of the distinguished physicians of our state, and Dr. Morris Fishbein of Chicago.

Thursday morning's session opened with prayer by Rev. Cyril E. Bentley, rector of Christ Church. Reports were read by delegates from the county auxiliaries. Our hearts glowed with pride as we listened to the worthwhile achievements of our Auxiliaries all over the state. A short talk from Dr. Fishbein, urging the influential circulation of Hygeia and health instruction whenever possible.

Dr. Dancy, President of the State Medical Association, brought us a message of encouragement and caution. He spoke in appreciation of the work we were doing, and advised us to keep close to the principles for which we were organized, and not to follow after strange gods, in our enthusiasm. He also advocated a scholarship fund to educate medical students as our important work.

Mrs. P. H. Jeter of the Parent-Teacher Association, which organization is one of our greatest avenues of health instruction, through the mothers, gave an illuminating talk on Cooperating to Promote Better Health.

Mrs. Allen Bunce, President of the American Medical Auxiliary, and Mrs. Jas. N. Brawner, president of the Southern Medical Auxiliary, and also Public Relations Chairman, gave interesting information.

The address of the state President, Mrs. Chas. C. Hinton, was beautifully given, and so truly expressed her wonderful executive ability which has been shown in the results of her administration. Mrs. Allen H. Bunce, of Atlanta, generously presented a sufficient sum of money to defray the expenses of printing the proceedings of this meeting. The

gift was accepted with appreciation and applause.

The following resolutions were read and adopted:

Resolved: That the President-Elect shall be chairman of the organization; that the Secretary shall keep the roll; that April 1st shall be the end of a definite fiscal year, and that the dues of seventy-five cents per capita must be in by then, based on the previous year's membership; that a registration fee of one dollar be paid by each person attending the annual meeting, only excepting visitors from other states and invited speakers, the proceeds to be turned over to the entertaining auxiliary.

Resolved: That the Woman's Auxiliary to the Medical Association of Georgia establish a health film library.

Resolved: That the expansion program of the State Board of Health be endorsed and all efforts be made to secure the appropriation for this work.

Resolved: That each member of an auxiliary plan or assist in a health program of some other organization of which she is a member, and whenever possible accept chairmanships in schools and clubs.

Resolved: That the Auxiliary send telegrams to Senators George and Harris asking federal aid in the elemination of malaria.

The President-Elect, Mrs. Marion Benson, was duly installed as President. The acceptance speech was a jewel of brevity and conciseness.

The following officers were elected for the coming year:

President-Elect Mrs. C. C. Harrold, Macon; first Vice-President, Mrs. J. A. Selden, Macon; second Vice-President, Mrs. H. D. Allen, Milledgeville; third Vice-President, Mrs. J. A. Redfearn, Albany; Recording Secretary, Mrs. Lee Howard, Savannah; Corresponding Secretary, Mrs. W. H. Garrison, Clarkesville; Treasurer, Mrs. Charles Waites, Atlanta; Parliamentarian, Mrs. J. E. Penland, Waycross.

Mrs. Hinton and the hostess auxiliary were lovely and gracious at all times. The delegates and visitors expressed their appreciation for the courtesies of the Bibb County Auxiliary, and with many mutual felicitations, the 1929 convention adjourned, with happy anticipations of 1930 in Augusta. The dinner dance Thursday evening was the social climax to an eminently successful association.

MRS. GEORGE M. NILES,
Delegate, Fulton County Medical Auxiliary.

TWELFTH DISTRICT MEETING

The Twelfth District Woman's Auxiliary of the Medical Association met at the home of Mrs. A. T. Coleman in Dublin, the guests of the Laurens County Auxiliary. The meeting was opened by the Lord's prayer given in concert and led by Mrs. W. C. Thompson. Mrs. W. E. Bedingfield of Rentz, President of the Laurens County Auxiliary, in a few well-chosen words gave a welcome to the visiting ladies and to this Mrs. D. D. Smith of Swainsboro responded. Mrs. J. Cox Wall of Eastman, District Manager, presided at the business session, introducing the state President, Mrs. M. T. Benson of Atlanta, who explained the objectives of the auxiliaries for the year, and read resolutions passed at the state meeting held in Macon. Besides the films, which are to be loaned to the counties and the legislative program, the main objective of the year is the securing of the means for placing a boy in some Georgia Medical College for four years and one year in a hospital, then establishing him in business, this to be refunded by the boy whenever possible. Dr. Wm. R. Dancy of Savannah, President of the Medical Association of Georgia, went into details on this subject, giving the ladies a clear idea of his plan. Mrs. J. Cox Wall moved that the Twelfth District endorse this plan. A unanimous vote followed. Mrs. Benson offers this year a prize to the District President organizing the greatest number of auxiliaries.

Mrs. C. W. Roberts of Atlanta spoke of her work with the Journal and Mrs. Selden of Macon, explained the Health Film Library Fund. Mrs. Massenburg of Macon was introduced.

The president of the county organizations gave their reports and it was found that Laurens County has the largest and strongest organization in the Twelfth District.

An election of officers resulted in Mrs. W. E. Bedingfield of Rentz being elected District Chairman and Mrs. D. D. Smith of Swainsboro, District Secretary and Treasurer.

After the business meeting a delightful program of the following numbers was given: Reading, little Annette Hodges; vocal solo, Mrs. M. Z. Claxton; musical reading, Miss Janette Shivers; vocal solo, Mrs. Crocket.

At the conclusion of the program a delicious iced course with sandwiches was served by the Laurens County Members.

To the Editor:

Dr. Wm. R. Dancy, President of the Medical Association of Georgia, notified me some time ago that I had been appointed chairman of the Advisory Committee to the Woman's Auxiliary.

Meanwhile, I have read with a great deal of interest, Dr. Dancy's address to the Aux-

iliary at the recent meeting of the Association in Macon. I do not know of any work which the Auxiliary can undertake which will accomplish as much as to create a Trust Fund, such as suggested by Dr. Dancy in that address, for the education of worthy and dependent young men who desire to become physicians. This address appeared in the May issue of the Journal, and has been read by most of its members.

The plan has some features which go beyond furnishing the funds for the applicant's education. The manner in which the young man may be selected, to me is its greatest potential factor. The reason that so many young men drop out of medical college between the first and the senior years, is because they are "sent" to school by their ambitious parents, rather than selected because of merit, and the same reason holds good for the young man who drops out of the profession within a year or two after his graduation. If a number of young men, who because of their own ambition and apparent aptitude, can be assisted through school each year by a Trust Fund, created by the Woman's Auxiliary, we will have a greater proportion of men practice their profession after graduation than at present. Moreover, if that class of young men who must obtain aid, if they receive an education at all, are assisted through medical college, a very large proportion of good physicians will come out of such a group.

I do not know of any one who is more likely to recognize the worthy young man in a community than the physician's wife, particularly when she has the assistance of her husband, who not only knows the financial condition of most of the people of his acquaintance, but also the character and the worthy elements in the lives of most of the young people in his community.

I can see further than the creation of a Trust Fund for the education of the boy, and even further than the finished product, when the young man becomes a successful physician. I can see the great satisfaction which will come to the Woman's Auxiliary in the knowledge that they have been the means of perpetuating the work which they, as well as their husbands have dedicated their lives. This effort is practical and idealistic, and at the same time, should be a genuine joy, in doing something which will reflect itself upon coming generations, in the service rendered by the men whom they will educate into the profession.

B. H. MINCHEW, M.D.
Chairman, Advisory Committee to
Woman's Auxiliary
Waycross, June 24, 1929.

DISTRICT MEETINGS

DATES AND PLACES

First District, Thursday, July 18, Hotel DeSoto, Savannah.

Second District, October 11th, Thomasville.

Sixth District, November, Griffin.

Eighth District, Wednesday, August 14th, Athens.

Ninth District, Wednesday, September 18th, Winder.

Tenth District, August, Augusta.

Twelfth District, January, Eastman.

TRI COUNTY MEDICAL MEETING

The Tri-County Medical Society, composed of the counties of Early, Calhoun and Miller and with members from Clay and Baker held their annual summer session in Arlington on June 5th. Dr. C. R. Barksdale, of Blakely, President of the society, presided.

Distinguished visitors on the program included three members of the faculty of the Medical Department of the University of Georgia, viz: Dr. H. M. Michel, Professor of Orthopedic Surgery; Dr. V. P. Sydenstricker, Professor of Medicine, and Dr. W. A. Mulherin, Professor of Pediatrics. They were down in response to a request of the medical profession in this section as a part of the extension service of the State Medical College.

Clinical cases were reported to the Society by Dr. J. G. Standifer, of Blakely; Dr. C. K. Sharp, of Arlington; Dr. W. C. Hays, of Colquitt, and Dr. J. L. Cheshire, of Damascus.

The next quarterly meeting of the Society will be held in Colquitt in September while the winter session will go to Blakely in December.

J. G. STANDIFER, M.D.
Blakely, Georgia.

FRATERNAL DELEGATES TO OTHER STATE MEETINGS

To visit Alabama: R. F. Wheat, Bainbridge; C. K. Sharp, Arlington.

To Visit Florida: W. F. Reavis, Waycross; G. Y. Moore, Cuthbert.

To visit North Carolina: Hal M. Davidson, Atlanta; C. D. Whelchel, Gainesville.

To visit South Carolina: Chas. C. Harrold, Macon; Wm. Shearouse, Savannah.

BOOK REVIEWS AND ABSTRACTS

Mark S. Dougherty, M. D.
Department Editor

BOOK REVIEW

Cardiac Arrhythmias; Clinical Features and Mechanism of the Irregular Heart. By Irving R. Roth, M.D., Assistant in Medicine; Chief, Children's Cardiac Clinic, Mt. Sinai Hospital; Instructor in Post-Graduate Studies on Diseases of the Circulatory System, conducted by Columbia University at Mt. Sinai Hospital, N. Y. Introduction by Emanual Libman, M.D., Clinical Professor of Medicine, Columbia University. Cloth. Price, $7.50. Pp. 210, with 80 illustrations and five tables. New York; Paul B. Hoeber, Inc., 1928.

The book is divided into two parts, part one dealing with the anatomy and physiology of the normal heart while part two takes up the cardiac arrhythmias. The method employed by Dr. Roth in illustrating the text is unique and remarkably clear. The impulse production, the auricular and ventricular response, the electrocardiogram, the heart sounds, the jugular and carotid pulses are all correlated upon the same graph system so that one may follow the heart cycles in all of their manifestations.

This is the best book upon the subject that I have yet had the pleasure of reading. The book is written primarily for the student and thus one does not have to be a cardiologist to understand it. The text is short but complete and merely serves to explain the diagrams. None but accepted theories are set down. The average doctor becomes wary when discussing the cardiac arrhythmias simply because he does not understand them all. Here in this volume is the best chance we have had so far of obtaining accurate knowledge of the baffling arrhythmias.

EVERT A. BANCKER, JR., M.D.
Atlanta, Ga.

MODERN X-RAY TECHNIC

Price $5.50
By ED C. JERMAN
Educational Department, Victor X-Ray Corporation, Chicago, Illinois
Bruce Publishing Company
St. Paul, Minn.

The author of this book gives in a clear cut way the details of x-ray technic derived from a long period of practical x-ray work and teaching x-ray technicians.

In the beginning of the book the author states that the three essentials necessary to obtain the maximum information from the x-ray are adequate equipment, proper technic and correct interpretation. Very little space is given to antiquated types of equipment and one is not burdened with an unnecessary amount of x-ray physics.

The value of standardization in x-ray exposure technic and calibration of x-ray equipment is stressed in order that results may be duplicated.

Many of the standard positions used in making x-ray examinations are demonstrated by excellent cuts. These will be of great value to many technicians.

The author stresses the importance of proper interpretation by a professional radiologist and emphasizes the responsibility of this phase of the work.

This book will be a valuable asset to any x-ray technician desiring to improve his technic regardless of the experience he may have had in the work.

J. W. LANDHAM, M.D.

Diseases of the Thyroid Gland, by Arthur E. Hertzler, M.D., Surgeon to the Halstead Hospital, with a Chapter on Hospital Management of Goiter Patients, by Victor E. Chesky, M.D., Associate Surgeon to Halstead Hospital, Second Edition. Entirely Rewritten; 286 pp. Price, $7.50. St. Louis, the C. V. Mosby Co., 1929.

This book is dedicated to Henry S. Plummer, which prejudiced this reviewer in its favor from the start. It is a well gotten up and beautiful example of the bookmakers' art. Only one typographical error was observed. Photographs, microphotographs and drawings by one of the best of the medical artists are abundant and serve to illustrate and emphasize the author's meaning. His dry, typical American humor, while never obtruding itself, constantly bobs up and makes the reading of the book a pleasure.

The most striking thing about this volume is that Dr. Hertzler has a relatively small hospital and most of his patients live in the neighborhood and have been followed up for a long time after operation, "many of them now for more than thirty years." This gives him a somewhat different point of view from that of a man who sees many more but who sees the vast majority of these only a few weeks. His constant stressing of the individual patient is splendid and should make the book of greater value to the average surgeon.

The absence of statistics certainly increases the readability. In only one place were figures used, "Epithelial malignancies occur in proportion of 1 to 300 goiter patients." He must mean 1 to 300 exophthalmic goiter patients, which is in accord with other figures. Excluding the exophthalmic group, Collier, of the University of Michigan (Jour. A. M. A., 92,-457,462, 1929) reports ninety cancers of the thyroid, an incidence of 4 per cent, and supports his thesis with figures ranging from 1.2 per cent (Graham) and 2.7 per cent (Pemberton) to 10 per cent (Kocher). Hertzler also says, "We have learned to

remove moles in anticipation of mischief, but the equal importance of fetal adenomas has received no attention." This is not true at the Mayo Clinic, and has not been for some years, and Collier has shown the same status at the University of Michigan.

The author is concerned primarily with the patient. He emphatically warns against operating upon adolescents with adolescent goiter, and upon highly neurotic persons whose thin necks make their thyroids appear enlarged. The reviewer must be allowed a quotation, "Nowadays most young people go to college, and no one wants to go among groups of young people with a big goiter. Perhaps they are a mechanical hindrance. "Necking" may be neither a slang expression nor a figure of speech." But he believes all nodular goiters—he prefers to call them bosselated—should come out as it is only a question of time when they will cause trouble. Recurrence of exophthalmic goiter, in his opinion, is due to failure to remove a sufficient amount of gland the first time. This clinical section is admirable.

Since the reviewer has announced his allegiance to Henry S. Plummer, he must in all honesty say that he can not agree with the author when he differs from Plummer. Hertzler apparently does not accept Plummer's hypothesis that the fundamental difference between adenomatous goiter with hyperthyroidism and exophthalmic goiter is due to a toxic thyroxin-like compound unsaturated with iodine, which in the case of exophthalmic goiter is added to the hypersecretion of normal thyroxin common to both diseases. But since Hertzler will not give Lugol's solution except to those patients who have consented to operation when ready for it, this disagreement is of academic rather than practical importance.

Chesky advocates the use of digitalis in many cases and of quinidine in some, both before and after operation. Plummer has convinced this reviewer that quinidine is never necessary and digitalis rarely if ever in the treatment of goiter. I will never forget that on one occasion I had given thirty minims of digitalis to a woman who was still water-logged after several days in bed with Lugol's when Plummer stopped it—and how! She lost 33 pounds of fluid in the next two weeks and went through her operation without batting an eyelid, and then began to put on a pound of flesh a day. On the other hand, it must be admitted that Hertzler and Chesky could have cited a host on their side.

On the whole, this is a sanely balanced, clearly written book that is well worth having. Its greatest value is due to the rational viewpoint of its author, who must be a charming man and who must have studied thoroughly the cases of goiter he has treated, which form no inconsiderable number.

L. MINOR BLACKFORD, M.D.

Clinical Electrocardiograms, by Frederick A. Willius, B.S., M.D., M.S. in Medicine, Section on Cardiology, the Mayo Clinic, Rochester, Minn., and Associate Professor of Medicine, the Mayo Foundation, University of Minnesota. Quarto volume of 219 pages with 368 electrocardiograms. Bound in cloth. Price, $8.00. Published by W. B. Saunders Company, Philadelphia, 1929.

This is a new volume in the Mayo Clinic Monographs and is a valuable contribution to the study of electrocardiography. The text of the book has been devoted entirely to the subject of reading the records themselves and their clinical significance. The reading matter has been reduced to a minimum in order to allow space for the excellent illustrations. Due to the size of the book, the tracings have been reproduced with as little reduction in size as possible.

Ten of the chapters have been devoted to the arrythmias, one chapter to the dying human heart, one to the normal electrocardiogram, one to coronary thrombosis and one each to ventricular preponderance and individual wave changes. The electrocardiograms have been well chosen to illustrate the points desired. Several tracings have been given of each condition thus allowing the reader to become acquainted with normal variations in individual tracings. The greatest value of the book lies in the practical assistance it gives to those whose experience in this field is limited. Do not fail to add this book to your clinical cardiac library.

E. A. BANCKER, JR., M.D.

Atlanta, Georgia.

Atlanta Proceedings of the Interstate Post-Graduate Medical Association of North America, 552 pages. Price $11. Dr. Edwin Henes, Jr., Treasurer, Milwaukee, Wisconsin.

This organization is one of the outstanding educational institutions of the world. Its principles are sound and its plan of obtaining subject matter is unsurpassed. The world is its field for selecting men to give the medical profession the very best and latest information. No time or money seems to be spared in securing this talent.

At its recent meeting in Atlanta every important country was represented, and outstanding men of each of the countries were selected. Their selection was based upon special training and distinction to which these men had attained in their respective departments. The field of medicine is as completely covered as could be in a series of clinics and lectures lasting only one week.

The proceedings are published annually in a single volume, and one who has the transactions of this organization since its beginning has the good fortune of possessing a large portion of the very best medical literature. These annual meetings are the only ones in America where such a galaxy of medical teachers assemble, and no volume gives one such an array of medical talent as is contained in the transactions of the Interstate Medical Association.

It would not be practical on account of space to enumerate even the names of the great masters who have contributed to this work, to say nothing of the subject matter. One needs only to glance through

the pages of the 1928 proceedings to see what a rich enmassing of medical knowledge that has been compiled. Those who had the good fortune to attend the Assembly will find the perusing of this volume highly advantageous in refreshing their minds upon what they heard, and those who did not attend it will find it a most instructive book for general reading and quite valuable for reference. It brings the progress in medicine more nearly up to date than the average book because the very latest things in medical knowledge is presented simultaneously by the outstanding workers of the day and is placed almost immediately before the reading public.

One after procuring it will no doubt consider it one of the most highly prized volumes in his library.

E. C. THRASH, M.D.

ABSTRACT
FAMILIAL GLYCOSURIA

Report of a Large Family

In the Annals of Internal Medicine for March, 1929, Dr. Harold M. Bowcock reports the study of a family in which eighteen members showed the presence of a reducing substance in the urine in the absence of any symptoms of diabetes. The blood sugar response to glucose administration by mouth was studied in five members of the family. In one case the reaction was characteristic of mild diabetes mellitus, in two cases characteristic of renal glycosuria and in two cases typical of cyclic renal glycosuria.

The three types of glycosuria mentioned above have the following characteristics: The mild diabetic displays a fasting blood sugar slightly above the normal, accompanied by the presence or absence of sugar in the simultaneous urine specimen. Following the administration of glucose by mouth, the blood sugar rises to an abnormally high level, usually reaching the peak of the rise only after an hour's time, accompanied by the appearance of sugar in the urine. The blood sugar level then decreases slowly and is still above normal at the end of three hours.

With renal glycosuria, the fasting blood sugar level is normal or low, and the simultaneously voided urine contains sugar. Following the administration of glucose by mouth, the blood sugar level does not as a rule rise even as high as in the normal individual; the peak of the rise is usually reached within forty minutes and within two hours the blood sugar has returned to a normal level. Varying quantities of sugar are excreted in the urine throughout the test.

With cyclic renal glycosuria the fasting blood sugar level is normal and the simultaneously voided urine is sugar-free. Following the administration of glucose by mouth, a curve similar to the normal blood sugar response is observed. Accompanying the normal rise in the blood sugar the simultaneous urine specimens begin to contain sugar at a blood sugar level, usually between 120 and 140 milligrams per 100 cc. of blood, demonstrating a low renal threshhold for glucose. In other words, glucose appears in the urine only after the ingestion of food or glucose, while in renal glycosuria the urine usually does not become sugar-free even during periods of fasting.

All the members of this family were apparently in good health and none of them presented the symptoms of diabetes mellitus. It is generally conceded that these types of glycosuria are not the result of pancreatic insufficiency. The presence of glycosuria in eighteen members of one family indicates the very strong hereditary trend of this symptom.

BOOKS RECEIVED

Gonnorrhea and Kindred Affections. Gonnorrhea in the male, Chancroid and Verruca Acuminata, by George Robertson Livermore, M.D., Professor of Urology, Medical Department, University of Tennessee, Memphis, Tenn.; Consulting Urologist, Memphis General and Baptist Memorial Hospitals, and Hospital for Crippled Adults; Attending Urologist, St. Joseph's Hospital. And Gonnorrhea in the Female, and the Infectious Granulomata, by Edward Armin Schumann, M.D., Associate Professor of Obstetrics, University of Pennsylvania; Gynecologist and Obstetrician to Philadelphia General Hospital; Gynecologist to Frankford Hospital; Gynecologist and Obstetrician to Jewish Hospital; Obstetrician to Jewish Hospital; Obstetrician to Chestnut Hill Hospital; Gynecologist and Obstetrician to Memorial Hospital. Contains 257 pages. Publishers: D. Appleton & Company, 35 West Thirty-second Street, New York City.

North Dakota Medicine—Sketches and Abstracts, by J. Grassick, M.D., Grand Forks, N. D. In the introduction of this volume, Dr. Grassick says, "There seems to be, common to every race, a desire to unite in clear conscientious relation the present with the future; for we find in the untutored native, as well as his cultured brother, warring against oblivion by leaving memorials of his existence—that he lived, labored and loved. Long before the written or printed page, the history of the ages was recorded in hierglyphic or mystic symbol on caveman's cavern; on Assyrian slab or tablet; or on Egyptian sarcophagus, temple or obelisk. Monuments in warth mound, cairn, cumulus, or pyramid, speak for the future, while pictured rock, decorated pottery, figured basketry, and curiously wrought pipe and image may similarly be interpreted; for the red man as well as the white, the celt as well as the copt were animated by the same fundamental impulse." Contains 378 pages. Publishers: North Dakota Medical Association, Grand Forks, N. D.

Principles and Practice of Minor Surgery. A textbook for students and practitioners, by Edward Milton Foote, M.D., Visiting Surgeon, St. Joseph's Hospital; Consulting Surgeon, Randall Island Hospitals and Schools; Commander, M. C., U. S., Naval Reserve Force; Members of the Association of Military Surgeons, U. S. Army, and Edward Meakin Livingston, M.D., Assistant Visiting Surgeon, Bellvue Hos-

pital; Instructor in Surgery, New York University and Bellevue Hospital Medical College; Vice-President, American Society of Regional Anesthesia, Sixth edition. Contains 787 pages with four hundred and twenty engravings. Publishers: D. Appleton & Co., 35 West Thirty-second Street, New York City.

Recent Advances In Psychiatry, by Henry Devine, O.B.E., M.D., Medical Superintendent, Holloway Sanatorium, Virginia Water; Lecturer on Psychology Maudsley Neurological Hospital; late examiner in psychology for diploma in Psychological Medicine, Royal College of Physicians; late Consulting Neurologist, Royal Victoria Hospital, Netley; late Medical Superintendent, Portsmouth City Mental Hospital. Contains 340 pages. Publishers: P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, Penn.

NURSING SCHOOLS BEING GRADED

(Continued from Page 328)

neglect to safeguard their schools become public.

The Board of Examiners of Nurses is making preparations to assist schools which request such assistance in carrying out the recommendations made by the Grading Committee.

What will the 58 per cent of the Georgia hospitals maintaining schools of nursing do about their standing one or two years hence?

JANE VanDeVREDE, R. N.

COMMUNICATIONS

PROMOTION OF THE WELFARE AND HYGIENE OF MATERNITY AND INFANCY

To the Editor:

You no doubt know that we have conducted four post-graduate schools in obstetrics in as many congressional districts for the physicians of Georgia. Other schools will be held by Professor J. R. McCord, of Emory University; the exact dates we can not announce at this time. Where the schools have been taken advantage of, the physicians are unanimous in their opinion that they are a success and well worth while. If you have not been fortunate enough to attend the course, we hope you will when the school is held near you. Announcements will be made from time to time.

The response we have met in taking this post-graduate course to the doctors has encouraged us that other work along this line might be desirable. We believe a five-day course in diseases of children would be most beneficial. We need and now ask your co-operation that we may determine the matter. First, what do you think about it? Second, would you like to have one in your district? Third, if five days were all the time we could arrange for, what subjects would you like presented? Do you think that the best hour for the lectures and clinics to start would be 2:00 o'clock in the afternoon? If not, what time can you attend? The course would be without cost to you.

On your reply to these questions will depend largely our decision. Please answer today.

Do not forget that we furnish silver nitrate for the babies eyes. Do you need a supply?

JOE P. BOWDOIN, M.D.,

Special Agent, Georgia State Board of Health and U. S. Department of Labor Children's Bureau Cooperating.

Atlanta, June 25, 1929.

To the Editor:

The mention of our new Nutley plant in the May issue of the Georgia Medical Journal is certainly appreciated.

No doubt you have been through the laboratories of quite a few pharmaceutical houses. We believe, however, that you would find many interesting surprises if you had an opportunity to go through the new Roche home when all is completed. You would be amazed, for example, at the intricate precautions taken to safeguard Digalen during the process of its manufacture. You would marvel at the many minute details which must be watched in the preparation of Pantopon. And Allonal tablets by the million would assure you of the emphatic approval given this outstanding non-narcotic remedy by the medical profession in all states.

So, if your plans for a summer vacation call for a visit to New York, be sure to include in your itinerary a run out to Nutley, where Mr. Bobst himself will be glad to see you.

HOFFMAN-LA ROCHE, INC.

Nutley, N. J., June 19, 1929.

NEWS ITEMS

The Seventh District Medical Society sponsored an intensive course in the principles and practice of pediatrics which was held June 17th to 21st, inclusive, at Rome. The Floyd County Medical Society and the State Board of Health cooperated. Dr. James R. McCord, Atlanta, conducted the clinics.

Dr. Lewis S. Patton announces the opening of offices in the Medical Arts Building, Atlanta. Practice limited to diseases of the eye, ear, nose and throat.

Dr. R. N. Johnson, formerly of Norcross, has been added to the house staff of the Harbin Hospital, Rome, as its resident physician.

Dr. Guy G. Lunsford, Cordele, has been reappointed by Governor L. G. Hardman, trustee for the University of Georgia Medical Department, Augusta, for a term of six years.

Drs. A. J. Ayers and William F. Lake announce their association in the practice of clinical pathology, x-ray diagnosis and x-ray therapy. Laboratories at 111 Medical Arts Building, Atlanta.

Dr. I. H. Hunter, formerly of Colquit, has moved to Douglas and announces the opening of his office in the Union Bank Building.

The editor of the Journal has an inquiry for a young physician, who would like to locate in a prosperous village in an excellent agricultural section. Any information forwarded to this office will be transmitted to the writer.

Dr. L. W. Martin, formerly of Atlanta, has moved to Thomson.

The physicians of Wilcox county met at the Reid Hotel, Rochelle, on May 31st and organized the Wilcox County Medical Society. Dr. H. A. Dorsey, Pitts, was elected president; Dr. E. C. Harris, Rochelle, secretary-treasurer.

Dr. C. W. Hilliard, formerly of Dothan, Ala., has removed to Carrollton and opened offices in the First National Bank Building. He will limit his practice to diseases of the eye, ear, nose and throat.

Dr. Thomas C. Clodfelter, formerly of Forsyth, has removed to Eatonton.

The Twelfth District Medical Society met at Dublin on June 13th. The scientific program was made up of the following titles of papers: Medical Problems of Today, by Charles E. Duffin, Swainsboro; Tuberculosis, by Dr. Edson W. Glidden, Alto; Cancer, by Dr. J. L. Campbell, Atlanta; Diarrhoea and Dysentery, by Dr. Benjamin Bashinski, Macon; Colitis in Children by Dr. D. D. Smith, Swainsboro; Plastic Surgery of the Face, illustrated with lantern slides, by Dr. E. D. Highsmith, Atlanta; Goiter, by Dr. Charles E. Waits, Atlanta; Case Reports, by Dr. Warren A. Coleman, Eastman; General Discussion, by Dr. Allen H. Bunce, Atlanta; Local Anesthesia in Industrial and Minor Surgery, by Dr. G. Y. Massenburg, Macon; address by Dr. William R. Dancy, Savannah, President of the Association. The next meeting of the society will be held at Eastman in January.

Dr. J. P. Kennedy, Atlanta, City Health Officer, held baby health clinics at a number of the schools during the week of June 10th. The mothers were invited to bring their children under four years of age.

The annual banquet of the Alumni Association of the School of Medicine of Emory University was held at the Biltmore Hotel, Friday ,June 7, 1929. Speakers on the program were: Address by Dr. T. C. Davison, Atlanta, retiring president; address by Dr. Harvey Cox, president of Emory University; Alumni Address by Dr. O. H. Bethea, professor of Clinical Therapeutics of Tulane University, New Orleans.

Dr. Harold F. McDuffie announces the removal of his office to the corner of Forrest Avenue and Courtland Street, Atlanta.

The Third District Medical Society met at Ashburn, June 19th. Papers on the scientific program were entitled as follows: The Protein Manifestations of Malaria, by Dr. J. H. Baxter, Ashburn; the Control of Malaria, by Dr. Eugene E. Murphey, Augusta; the Prevention of Typhoid Fever and Related Diseases, by Dr. J. D. Applewhite, Macon; Brill's Disease—Report of Three Cases, by Dr. V. O. Harvard, Arabi; State Board of Health Legislative Program, by Dr. T. F. Abercrombie, Commissioner of Health; Address, by Dr. G. Y. Moore, President-Elect; address by Dr. William R. Dancy, President of the Association.

Dr. George L. Echols, Milledgeville, is at the Boston Psychopathic Hospital, Boston, Mass., taking post-graduate work. He will be at home about October 1st.

The Chattahoochee Valley Medical and Surgical Association held its twenty-ninth annual session at Dothan, Ala., July 9, 10. The following physicians of Georgia were on the program: Eugene E. Murphey, Augusta; E. B. Anderson, Americus; W. P. Jordan, Columbus; Earl Floyd, Atlanta; Francis B. Blackmar, Columbus; Murdock Equen, Atlanta; E. A. Bancker, Jr., Atlanta; Hugh McCulloh, West Point; W. W. Young, Atlanta; N. M. Owensby, Atlanta; C. E. Dowman, Atlanta; R. C. Pendergrass, Americus; William F. Lake, Atlanta; Beecher DuVall, Atlanta; Ed H. Greene, Atlanta; Marion C. Pruitt, Atlanta; W. L. Champion, Atlanta; Joseph Yampolsky, Atlanta; William A. Mulherin, Augusta; J. O. Elrod, Forsyth; R. B. Gilbert, Greenville; George W. Fuller, Atlanta; W. E. Barber, Atlanta; G. Y. Massenburg, Macon; C. H. Richardson, Jr., Macon; Dan Y. Sage, Atlanta; John B. Fitts, Atlanta; H. C. Sauls, Atlanta; George M. Niles, Atlanta; H. M. Bowcock, Atlanta; S. H. Shippey, Atlanta; D. C. Elkin, Atlanta; T. E. Rogers, Macon; J. R. Barfield, Atlanta; J. F. Denton, Atlanta; Shelley C. Davis, Atlanta; B. H. Minchew, Waycross; I. W. Irvin, Albany; H. M. Lokey, Atlanta; F. G. Hodgson, Atlanta; Hal M. Davison, Atlanta; M. M. Head, Zebulon; William A. Smith, Atlanta; Lee Bivings, Atlanta; W. L. Cooke, Columbus; Olin S. Cofer, Atlanta; L. G. Baggett, Atlanta; W. A. Gardner, Atlanta; J. A. McGarity, Atlanta; J. M. Anderson, Columbus; T. L. Byrd, Atlanta; J. A. Fountain, Macon; C. H. Holmes, Atlanta; George F.

Klugh, Atlanta; M. A. Fort, Bainbridge; Theodore Toepel, Atlanta; H. S. Alden, Atlanta; Jack Jones, Atlanta; W. A. Selman, Atlanta; Frank K. Boland, Atlanta; R. S. Leadingham, Atlanta; Guy J. Dillard, Columbus.

The Sixth District Medical Society met at Indian Springs on June 26th. The Scientific program was made of the following titles for papers: Mule-Kick Injury to Abdomen—Followed by Unusual Complications. Case Report by Dr. L. D. Porch, Macon; Non-Vital Teeth, by Dr. W. C. Pumpelly, Macon; Heart Diseases In Children—Cases Demonstrated by Dr. B. F. Akin, Jenkinsburg; Round Worm Infection In Children—Case Report by Dr. R. C. Goolsby, Jr., Macon; Cancer Problem, by Dr. J. L. Campbell, Atlanta; Spinal Anesthesia, by Dr. W. J. Rollins, Macon; Pyloric Obstruction—Case Report, by Dr. Thomas Harrold, Macon; Surgery On the Diabetic, by Dr. O. H. Weaver, Macon; Address by Dr. M. M. Head, Councilor, Sixth District; Address by Dr. William R. Dancy, President of the Association.

The Southern Surgical Association will meet in Atlanta December 10, 11, 12. Dr. Frank K. Boland, Chairman of the Entertainment Committee, will arrange for special entertainment and a banquet. The Association met in Atlanta last in 1913.

Dr. Horace G. Huey, Homerville, has been appointed a member of the board of trustees of the University of Georgia Medical Department, Augusta, by Governor L. G. Hardman.

Dr. Stewart R. Roberts, Atlanta, delivered an address before the Florida East Coast Medical Association at Daytona Beach, June 15th.

Dr. George W. Heriot, Savannah, has been appointed house physician for the Central of Georgia Railway Hospital at Savannah. He was formerly at the Georgia Baptist Hospital, Atlanta.

Dr. James R. McCord, Atlanta, conducted a post-graduate course in obstetrics at Savannah during the week of June 24th. This was a continuation of the post-graduate work under the auspices of the State Board of Health and the U. S. Department of Labor Children's Bureau.

Hoffman-LaRoche, Inc., Nutley, N. J.: formerly operating under the firm name of "The Hoffmann-LaRoche Chemical Works," New York City; announce the removal of their offices to and the operation of their new plant at Nutley, N. J. All communications in the future should be addressed to Nutley, N. J.

Dr. William B. Clark announces his association with Dr. J. R. Childs, offices in the Hurt Building, Atlanta. Practice limited to diseases of the eye, ear, nose and throat.

Dr. George L. Johnson and his staff of assistants at the United States Veterans' Hospital on Peachtree Road, Atlanta, were given a farewell party on June 20th. Features of the party were music by the Kimo Kalohi's Hawaiians and novelty dancing by little Miss Annie Clyde Edgar. Testimonial by Reuben Sutton, a patient at the hospital, commending the doctors, nurses and attendants for their excellent services. The hospital has been closed for one year in order that extensive additions and alterations may be made.

Dr. T. H. D. Griffitts, of the United States Public Health Service, formerly stationed at Biloxi, Miss., has been transferred to Albany to direct the work of malaria control.

Dr. C. J. Maloy, Helana, Secretary-Treasurer of the Telfair County Medical Society, is taking a post-graduate course at the New York Polyclinic Medical School and Hospital, New York City.

Dr. William L. McDougall announces the removal of his offices to suite 417 Atlanta National Bank Building, Atlanta. Practice limited to diseases of the eye, ear, nose and throat.

In addition to the articles previously accepted by the Council on Pharmacy and Chemistry of the A. M. A.: Parke, Davis & Company, Ampoules of Pitocin, and Ampoules of Pitressin have been accepted.

Dr. B. B. Bagby, Athens, resigned as commissioner of health for Clarke County, resignation effective July 1st.

Dr. P. T. Scoggins, formerly of Athens, is now associated with Dr. A. A. Rogers, Commerce, in the practice of medicine.

Dr. James A. Otwell, Cumming, and Dr. F. C. Holden, formerly of Ellijay, will be associated in the practice of medicine at Cumming.

SHOCK-PROOF X-RAY APPARATUS NOW AVAILABLE

Simplification in design and improved controls have enabled the roentgenologist to constantly improve the quality of his work and obtain uniformly satisfactory results through the standardized technic which these improvements have made possible.

Shortly after the CDX was placed on the market the Victor engineering and designing organization under the leadership of Mr. J. B. Wantz started work on the development of a shock-proof type of x-ray unit for the use of the roentgenologists in the medical x-ray field.

The development of the Shock Proof X-Ray Unit is considered as probably the most important contribution to x-ray science since the advent of the Coolidge Tube. The knowledge and experience gain-

ed during these many years are reflected in the design of this new apparatus. Nothing has been left undone to bring to a realization the finest piece of workmanship, in justice to the important role to which it is believed this apparatus will be assigned in future radiology. It is dedicated to that body of specialists the roentgenologists, who have so immeasurably contributed to the advancement of medical science.

OBITUARY

Dr. Andrew Temples, Statesboro; Southern Medical College, Atlanta, 1893; died suddenly at his home on June 17, 1929. He moved with his father to Bulloch county in 1876 and for a number of years resided at Portal, where he owned extensive farming interest. Dr. Temples was widely known and held in high esteem for his gentleness and charitable deeds. He practiced medicine for more than thirty-five years and recently in the tornado disaster, he did his share in rendering medical aid to the sufferers. Surviving him are his widow; one daughter, Mrs. Clark Wilcox, Calhoun; three sons, Dr. P. M. Temples, Rome; John Temples, Rome; and Leo Temples, student at the University of Georgia Medical Department, Augusta.

Dr. Thomas Alphonsus Spears, Atlanta; member; Emory University School of Medicine, Emory University, Georgia, 1924; aged 32; died suddenly on June 15, 1929. He enjoyed an extensive practice and had many friends. Surviving him are his widow, father and mother, Dr. and Mrs. William T. Spears, Rutledge; one sister, Mrs. Glen R. Martin, Atlanta. Interment was in the Rutledge Cemetery, Rutledge.

Dr. William T. Dodd, Jonesboro; aged 59; died at his home on June 11, 1929. He had been in ill health for two years and retired from practice. Dr. Dodd was a native of Clayton county and a member of one of the pioneer families of that section. Dr. G. P. Dodd, his father, was a general practitioner and had an extensive practice over the entire county. Dr. Dodd was a member of the Baptist Church. Surviving him are his widow; four daughters, Mrs. M. H. Thames, Red Oak; Mrs. A. A. Camp, Jr., Jonesboro; Misses Gladys and Mary Dodd, Atlanta. Funeral services were conducted from the Jonesboro Baptist church by Rev. Mr. Sparkman and interment in the Jonesboro cemetery.

KAHN AND WASSERMANN TESTS

(Continued from Page 326)

be negative by reason of an excessive amount of this substance even in the presence of active syphilis. Inasmuch as this is an error to which the Kahn test is not subject, a comparison of the results of the two tests with this error in view is of interest. It occasionally happens that a specimen of blood serum will give a four-plus Kahn test and be negative in both Wassermann tests. When this happens the first thing of course is to look for the presence of an excessive amount of native anti-sheep hemolysin. Failing to find this some other disturbing factor should be looked for. Since October first in each instance in which this condition of affairs

Table V

Total Disagreement Between Wassermann and Kahn					*Amount of serum used in test*		
Specimen number	Wassermann	Kahn	0.2	0.1	0.075	0.050	0.025
6990	—	4	+	+	I Q	—	—
7023	—	4	+	+	"	—	—
7037	—	4	+	+	"	—	—
7157	—	4	+	+		+	+
7329	—	4	+	+	"	—	—
7536	—	4	+	+	"	—	—
7599	—	4	+	+	"	—	—
7609	—	4	+	+	"	—	—
8226	—	4	+	+	"	—	—
8405	—	4	+	+	"	—	—
8436	—	4	+	+	"	—	—
8613	—	4	+	+	"	—	—
8628	—	4	+	+	+	+	+
8662	—	4	+	+	+	+	±
8687	—	4	+	+	±	—	—
8694	—	4	+	+	+	+	+
8720	—	4	+	+	±	—	—
8732	—	4	+	+	+	+	±
8886	—	4	+	+	IQ	—	—
16	—	4	+	+	+	+	+
27	—	4	+	+	+	+	±
66	—	4	+	+	+	±	±
840	—	4	+	+	+	+	+
841	—	4	+	+	+	+	+
857	—	4	+	+	+	+	±
1144	—	4	+	+	+	±	±
1145	—	4	+	+	+	+	+

I Q—Insufficient quantity of material.

occurred we have subjected the serum under consideration to a titration for the amount of native anti-sheep hemolysin, provided the quantity of serum available was sufficient for the test. Since that time there has been 3,413 specimens submitted to the laboratory, 31 of which have been positive to the Kahn test and straight negative to the Wassermann. Table V exhibits the results of the hemolysin titration on these specimens.

The method of titration consisted of placing graduated amounts of the serum under test in a series of tubes and adding complement and sheep cells. The plus sign in the Table indicates comple hemolysis, that is to say, it indicates that the amount of serum in that particular tube contained an amount of native anti-sheep hemolysin, sufficient to effect a complete hemolysis of the red cells

used. It may easily be figured out that if 1-40 of a cc. of serum contained an efficient dose of anti-sheep hemolysin, 1-10 of a cc. of serum used in the routine test would contain four times this amount, so that the test was actually done with five times the necessary amount of Anti-sheep substance. As we have shown in the paper referred to above, this amount of anti-sheep substance is sufficient to upset a large proportion of Wassermann tests. Feeling that the same phenomenon might be accountable for even slighter differences in favor of the Kahn test we have also titrated a number of samples whose tests showed differences of the same nature, but not to the same extent as those given in Table V. Table VI exhibits the results of these tests.

TABLE VI

Specimen Number	Discrepancies Between Wassermann and Kahn		Amount of Serum Used in Test				
	Wassermann	Kahn	0.2	0.1	0.075	0.050	0.025
8663	+	4	+	+	+	+	+
8816	2	4	+	+	+	+	+
8833	±	4	+	+	+	+	+
8835	+	4	+	+	±	±	±
8838	+	4	+	+	+	+	±
8844	±	4	+	+	±	±	—
8887	+	4	+	+	+	+	+
8891	3	4	+	+	±	I Q	—
8957	+	4	+	+	+	±	±
8989	+	3	+	+	+	±	—
8991	2	4	+	±	—	—	—
9033	±	4	+	+	±	±	—
9121	+	+=3=4	±	±	—	—	—
38	±	4	+	+	±	±	—
67	+	4	+	±	I Q	—	—
234	±	4	+	+	+	+	±
272	—	2	+	+	±	—	—
820	—	2	+	+	+	+	I Q
829	2	4	+	+	I Q	—	—
915	+	4	+	+	I Q	—	—
916	3	4	+	+	±	±	—
932	+	4	+	+	+	+	+
933	+	2	+	+	+	+	+
937	±	4	+	+	+	+	+
1029	+	3	+	+	+	±	±
1069	—	3	+	+	±	—	—
1087	+	4	+	+	±	—	—
1139	±	4	+	+	+	+	+
1176	+	4	+	+	±	±	—
1186	2	4	+	+	+	+	+

I Q=Insufficient quantity of material.

It will be seen that in many of the cases in which the Kahn test gives a higher reading than the Wassermann test the difference may reasonably be attributed to the disturbing influence of an excessive amount of native anti=sheep substance. It seems to us that this is a very strong argument in favor of the Kahn test. It does not of course assist us in explaining those cases in which the difference is in the other direction, but after rejecting those instances in which a lower Wassermann reading than the Kahn reading can be attributed to this particular cause the variations will be about as much on one side of the table as the other. That is to say, the Wassermann reading will be higher than the Kahn just about as often as the Kahn is higher than the Wassermann, leaving us a problem for which no satisfactory solution has been presented. Mere chance errors in technique might be held to account for this condition of affairs. Such an explanation would be tenable on a priori ground although it would leave much to be desired from a scientific standpoint.

WANTED—location for practicing medicine by an ethical and reputable physician. Graduate of the University of Louisville School of Medicine, middle aged and good habits. Address: H. M., care The Journal.

MEDICAL ASSOCIATION OF GEORGIA

Next Annual Session, Augusta, Ga., May 14, 15, 16, 1930

OFFICERS

President ..... Wm. R. Dancy, Savannah
President-Elect ..... G. Y. Moore, Cuthbert
First Vice-Pres. ..... Chas. H. Richardson, Jr., Macon
Second Vice-Pres. ..... Grady N. Coker, Canton
Secretary-Treasurer ..... Allen H. Bunce, Atlanta
Parliamentarian ..... M. A. Clark, Macon

DELEGATES TO THE A. M. A.

Wm., H. Myers (1929-30) ..... Savannah
Alternate, Wm. A. Mulherin ..... Augusta
E. C. Thrash (1929-30) ..... Atlanta
Alternate, C. W. Roberts ..... Atlanta
Allen H. Bunce (1930-31) ..... Atlanta
Alternate, O. H. Weaver ..... Macon

COUNCIL

M. M. Head, Chairman ..... Zebulon
C. L. Ayers, Clerk ..... Toccoa

COUNCILORS

1. Wm. H. Myers (1930) ..... Savannah
2. J. A. Redfearn (1930) ..... Albany
3. B. T. Wise (1930) ..... Americus
4. O. W. Roberts (1930) ..... Carrollton
5. E. C. Thrash (1931) ..... Atlanta
6. M. M. Head (1931) ..... Zebulon
7. M. M. McCord (1931) ..... Rome
8. H. M. Fullilove (1931) ..... Athens
9. C. L. Ayers (1932) ..... Toccoa
10. S. J. Lewis (1932) ..... Augusta
11. A. S. M. Coleman (1932) ..... Douglas
12. J. Cox Wall (1932) ..... Eastman

VICE-COUNCILORS

1. C. Thompson (1930) ..... Millen
2. R. F. Wheat (1930) ..... Bainbridge
3. Chas. A. Greer (1930) ..... Oglethorpe
4. W. H. Clark (1930) ..... LaGrange
5. W. A. Selman (1931) ..... Atlanta
6. K. S. Hunt (1931) ..... Griffin
7. W. H. Perkinson (1931) ..... Marietta
8. Paul L. Holliday (1931) ..... Athens
9. J. K. Burns (1932) ..... Gainesville
10. H. D. Allen, Jr. (1932) ..... Milledgeville
11. Kenneth McCullough (1932) ..... Waycross
12. J. W. Edmondson (1932) ..... Dublin

COMMITTEES

SCIENTIFIC WORK

C. H. Richardson, Jr., Chairman ..... Macon
C. W. Roberts ..... Atlanta
A. H. Bunce, Secretary-Treasurer ..... Atlanta

PUBLIC POLICY AND LEGISLATION

Chas. E. Waits, Chairman (1931) ..... Atlanta
J. W. Palmer (1932) ..... Ailey
A. R. Rozar (1930) ..... Macon
Paul Eaton (1930) ..... Augusta
V. H. Bassett (1931) ..... Savannah
Wm. R. Dancy, President ..... Savannah
G. Y. Moore, President-Elect ..... Cuthbert
A. H. Bunce, Secretary-Treasurer ..... Atlanta
T. F. Abercrombie, Commissioner of Health State of Georgia ..... Atlanta

MEDICAL DEFENSE

M. A. Clark, Chairman (1933) ..... Macon
W. A. Mulherin (1934) ..... Augusta
E. C. Thrash (1931) ..... Atlanta
M. M. Head, Chairman of Council ..... Zebulon
A. H. Bunce, Secretary-Treasurer ..... Atlanta

HOSPITALS

C. S. Lentz, Chairman (1933) ..... Augusta
Grady N. Coker, Secretary (1932) ..... Canton
K. McCullough (1934) ..... Waycross
Geo. F. Klugh (1930) ..... Atlanta
Julian K. Quattlebaum (1931) ..... Savannah

ABNER WELLBORN CALHOUN LECTURESHIP

J. E. Paullin, Chairman (1933) ..... Atlanta
H. I. Reynolds (1934) ..... Athens
E. E. Murphey (1930) ..... Augusta
Craig Barrow (1931) ..... Savannah
Frank K. Boland (1932) ..... Atlanta

NECROLOGY

R. L. Miller, Chairman ..... Waynesboro
M. Hines Roberts ..... Atlanta
J. R. Broderick ..... Savannah

MEDICAL HISTORY OF GEORGIA

E. C. Thrash, Chairman ..... Atlanta
Frank K. Boland ..... Atlanta
M. A. Clark ..... Macon
Wm. R. Dancy, President ..... Savannah
A. H. Bunce, Secretary-Treasurer ..... Atlanta

CRAWFORD W. LONG MEMORIAL PRIZE

Wm. R. Dancy, Chairman ..... Savannah
Stewart R. Roberts ..... Atlanta
V. P. Sydenstricker ..... Augusta
George Bachmann ..... Atlanta
R. V. Lamar ..... Augusta

CANCER COMMISSION

J. L. Campbell, Chairman ..... Atlanta
J. W. Simmons ..... Brunswick
G. H. Lang ..... Savannah
Chas. H. Watt ..... Thomasville
J. C. Patterson ..... Cuthbert
A. A. Barge ..... Newnan
H. G. Weaver ..... Macon
R. M. Harbin ..... Rome
M. B. Allen ..... Hoschton
Stewart D. Brown ..... Royston
W. J. Cranston ..... Augusta
J. W. Edmondson ..... Dublin
E. L. Bishop ..... Atlanta

AWTRY & LOWNDES
FUNERAL DIRECTORS.
AMBULANCE SERVICE

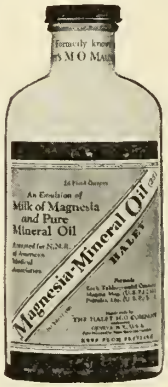
EAGER & SIMPSON
SURGICAL CORSETS
ABDOMINAL SUPPORTS
UPLIFT BRASSIERES, ETC.
8 N. Forsyth St. Atlanta
Walnut 4972

SALES
REPRESENTATIVE
We have a few selected territories open and wish men now calling on doctors to sell our complete line of surgical supplies from catalog; either full or part time; commission only; give in confidence full information regarding self and territory covered.
HAROLD SURGICAL CORPORATION
204-6-8 E. 23rd St., New York, N. Y.

No Starch
Listers
CASEIN-PALMNUT
Dietetic Flour
Starch-free Diabetic Foods that are appetizing are easily made in the patient's home from Listers Flour. It is self-rising. Ask for nearest depot or order direct.
LISTER BROS. Inc., 41 East 42nd St., NEW YORK

Lac-Bismo
(HART)
See Description, Journal A.M.A.
Volume XLVII, Page 1488.
A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water.
Each fluidrachm contains 2½ grains of the combined salts in an extremely fine state of subdivision.
MEDICINAL PROPERTIES: Gastric Sedative, Antiseptic, Mild Astringent and Antacid.
INDICATIONS: In Gastro-Intestinal Diseases, Diarrhoea, Dysentery, Cholera-Infantum, etc. Also suitable for external use in cases of ulcers, etc.
E. J. HART & CO., Ltd.
Mfg. Chemists
New Orleans

Therapeutic Teamwork
favors results which satisfy both
Patient and Doctor
Magnesia-Mineral Oil (25)
HALEY
formerly Haley's M-O Magnesia Oil
has been accepted for
N. N. R. of the A. M. A.
Uniform, permanent, unflavored and pleasant emulsion of Magma Mag and Liquid Petrolatum.
LUBRICANT · ANTACID
LAXATIVE



FORMULA:
Each Tablespoonful Contains
Magma Mag. (U. S. P.) ʒ iii,
Petrolat. Liq. (U. S. P.) ʒ i.

Oral or Gastric Hyperacidity, Gastric or Duodenal Ulcer, Intestinal Stasis, Autotoxemia, Obstipation, Colitis, Hemorrhoids, Pre- or Post-Operative, Pregnancy, Maternity, Infancy, Childhood, Old Age.

An Effective Antacid Mouth Wash
Generous sample and literature on request
Watch for "The Eulogy Of The Doctor"
The
HALEY M-O COMPANY, Inc.
Geneva, New York

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | August, 1929 | No. 8

GALLBLADDER DISEASE*
Clinic

A. R. ROZAR, M. D.
Macon

There are certain old axioms in medicine that have been handed down to us, and sometimes we are inclined to accept them as true too long; I refer here to the one, "We find gallbladder disease in patients fair, fat and forty." This was probably true, with exceptions, with our fathers in medicine, but diseases change as surely as styles and sometimes, I think, almost as rapidly.

During the comparatively short period of my professional life, the automobile has come into universal use. With the automobile came numerous fractures of the forearm from cranking the car; then the improvement of the self-starter, and the fractures of the forearm were no more.

We all know that appendicitis is on the increase. I am sure that prior to Gov. Atkinson's time there must have been cases of appendicitis and deaths from "inflammation of the bowels," but I feel almost as certain that this disease was not nearly so frequent as we find it now.

We were also taught that gallbladder disease was nearly always secondary to typhoid fever, that if we had a case of gallbladder disease in a patient around 40, that they must have had typhoid fever in early life, and if they didn't know anything about it, they must have had it anyway.

I think most of you will agree with me that we have had a much higher percentage of organic heart disease since the epidemic of flu in 1918-19 and the minor epidemics since, than ever before. Since this time I feel equally sure that we have seen more cases of gallbladder disease, especially in younger people under the age of the proverbial "40." Typhoid fever is perceptibly on the decrease, so there must be some reason for the increase in gallbladder disease. I am sure that gallbladder disease can and frequently does arise from foci of infection in the body and other causes, but I do feel that influenza has played a great part in the increase, especially in younger people.

I have been rather impressed with the large number of cases that I have seen in young people in the early twenties for the past few years, and that is the reason I selected this subject to talk about today. I might think that I had probably become interested and for this reason I had found more cases, for you nearly always find what you look for, but I feel sure that this is not true, because most of the patients, especially the young ones, have been cases referred to me with diagnosis already made, and cases in which cholecystogram and operation verified the diagnosis. I submit briefly the following case:

F. R., white woman, single, aged 26. C. C. Pain in right hypochondriac and subscapular region; nausea; chronic constipation; headache; extremely nervous.

P. I. Patient has been having trouble with her stomach for about eight years. It started with an attack of acute indigestion following a heavy meal of pork that was very fat. This attack was very severe. Since this time she has been troubled with chronic indigestion and nausea; seldom vomits. Bowels have been constipated for several years. About five years ago she had her appendix removed thinking it would help her, but it did not. She has been growing progressively worse until for the past few weeks she has suffered quite a bit. The pain is mostly in the right hypochondriac and right subscapular regions. These pains are for the most part dull, aching and gnawing, with occasional sharp cutting pains. These acute pains are very severe at

*Informal clinic before the Medical Association of Georgia, Macon, Georgia, May 8, 1929.

times and come on often at the present time. Appetite seems fairly good. She has not eaten fatty food for several years.

History: There is no history of malignancy, tuberculosis, heart or kidney trouble. Her father had some kind of stomach trouble. Patient had "measles" when a child which seems to have affected her right leg as it did not develop as it should have and is smaller than left leg. Left patella has been injured. She had influenza and pneumonia several years ago, she has had a severe cough for several weeks. Occasionally she has night sweats. There is no history of dyspnea or palpitation. Feet and ankles swell at times and there is some edema of eyelids in mornings. She voids three to four times a day, seldom at night, with stinging and burning at times. She is subject to headache and dizziness and has been extremely nervous for several years. Her habits are regular. Menstruation began at 18, has always been irregular, usually coming on every three to six weeks, but sometimes not for as long as three to four months. The flow is scanty and lasts four to seven days; considerable pain.

Physical: Cran. negative; eyes negative; ears negative; nose negative; gums markedly congested; teeth in fair condition; tongue congested, thorax deep and full and symmetrical; breath sounds normal; no rales heard. C. V. Heart is about normal in size and contour; heart sounds are faint and indistinct; no murmurs heard. Abdomen is rounded and symmetrical; no visible masses. Abdomen is generally tender, but tenderness is more marked in right epigastric, hypochondriac and right subscapular regions. Slight tenderness in left lumbar region. Scar in right iliac region site of a previous operation.

Pre-operative Diagnosis: Chronic Cholecystitis.

Operative Diagnosis: Chronic cholecystitis with adhesions to anterior abdominal wall.

Cholecystectomy was done June 4, 1928, and convalescence was uneventful.

DISCUSSION ON CLINIC OF DR. ROZAR

Dr. T. C. Davison, Atlanta: Cholecystitis is not a rare disease; in fact, it is quite common, but probably in the great majority of cases disease of the gallbladder is overlooked, inasmuch as the symptoms refer more to the stomach. While gallbladder disease is usually thought to be largely confined to those past middle age, it does occur in young people and even in children. It is more prevalent in the female than in the male.

Extensive investigations have been made as to the bacteriology of cholecystitis. Cultures have been made from the contained bile and from the ground up walls of the diseased gallbladders, and the results have been that more than 50 per cent of the bile cultures have been sterile while the great majority of the cultures made from the walls of the gallbladders were positive. The streptococci predominated, other bacteria found were colon bacilli, B. Welchii, B. typhosus, and staphylococci. The conclusions were that the infection does not reach the gallbladder by the bile current, but through the lymphatics from the liver, or by a hematogenous route. It is undoubtedly true that inflammations of the gallbladder are often secondary to infections in other abdominal viscera, especially the appendix, and it is not unbelievable that cholecystitis may be the result of a filthy mouth or neglected pyorrhoea.

Acute Cholecystitis may be mild, moderate or severe, and may terminate in empyema of the gallbladder, or perforation. In the majority of cases, however, it undergoes resolution and becomes chronic, with perhaps acute exaccerbations from time to time as years go by. The acute type presents the picture of the "acute abdomen," the severity of the symptoms depending upon the condition of the gallbladder. Chronic cholecystitis may follow an acute attack, but it is also true that chronic cholecystitis often begins insiduously without a preceding attack of acute inflammation. In chronic cholecystitis the gallbladder wall is thickened, and grayish rather than the "robin egg blue." In advanced cases the wall may attain the thickness of a centimeter or more, and there may be adhesions to other organs. We have seen these adhesions quite dense and even a biliary fistula between the gallbladder and the stomach or intestine. Sometimes the pathological changes are slight and yet in such cases the symptoms may be more prominent than in the more severe cases. It is my experience in such cases that we more often relieve the patient by cholecystectomy when the symptoms are prominent and the disease is not far advanced than when the disease is advanced and has been present over a long period of time.

The presence of stones in cholecystitis is more often the result of the disease than the cause, though the stones do act as an irritant when present.

The physiology of the gallbladder is largely that of a concentrating plant and reservoir. The concentration takes place by the water being absorbed by the abundant lymphatics of the gallbladder wall, leaving the bile in the gallbladder ten times more concentrated than that in the hepatic ducts. This con-

centrated bile collects in the gallbladder during fasting and with the ingestion of food, especially fats, the gallbladder begins to empty itself and the concentrated bile flows into the duodenum and aids in digestion. In cases of cholecystitis with thickened gallbladder wall and with adhesions present this emptying process may be interferred with to some extent, thereby producing a stasis, with still further concentration of the retained bile. This may result in the precipitation of bile salts, producing so-called "bile sand," which in turn acts as a nucleus for gall stones.

The symptoms of chronic cholecystitis vary according to its severity, but are largely those of "dyspepsia." It is easy in advanced cases with recurrent attacks of pain in the right upper quadrant, associated with nausea and vomiting to make a diagnosis, and still easier if there have been attacks of jaundice with these recurrent attacks of pain. But the diagnosis of the less advanced cases presents more difficulties, and it is, of course, most desirable that cholecystitis should be diagnosed in its early and mild forms before it has had time to produce the serious effects which rise to the classical clinical picture of this condition. It is true that the gallbladder can produce symptoms even when it does not present definite evidences of inflammatory disease, and it has been the experience of clinicians that the removal of a gallbladder which has shown a disappointingly small amount of inflammation has nevertheless often resulted in the prompt disappearance of symptoms of abdominal distress. The most usual symptoms are gastric distress, and the chief complaint is "stomach trouble." These patients have a feeling of fullness after eating, gas and belching, and some "spit up" their food. Practically all of them cannot eat certain articles of food, such as meats, pork, greasy fried foods, sweets, raw apples, dried beans or peas stewed, the variety differing in the individual case. The majority of them complain of pain in the right upper quadrant, but many of them insist that the pain is "in the stomach," until the doctor locates it definitely in the right upper quadrant just under the margin of the ribs, at the examination. In most of these cases the pain radiates to the back under the right scapula and at times to the left shoulder. Nausea and vomiting are present in about half of the cases. Eructation of gas is almost always a distressing symptom. Loss of weight may be present, but most often these patients increase in weight in spite of their "stomach trouble." Jaundice may be present in a small per cent of cases, but it is very slight as a rule and is evidenced by a "muddy complexion" and a slight staining of the sclera. A definite jaundice is seldom seen except when stones are present, with attacks of colic and common duct obstruction. The history of jaundice in a suspected case of cholecystitis is of great value when it is present, but is of no value when absent.

A well taken history is all-important in making a diagnosis of cholecystitis. In a case of so-called "chronic indigestion" with the classical symptoms as just described, at the examination we usually find that the patient is sensitive over the region of the gallbladder, the degree of sensitiveness depending upon the individual patient and the severity of the disease. In cases of marked stasis and in a thin subject at times the gallbladder can be palpated and definitely outlined, but these cases are rare. The x-ray has been of little value to us in the diagnosis of gallbladder disease until within the last few years, but now cholecystography has been developed until we feel that no case of suspected cholecystitis has been fully examined until the patient has been given the benefit of a careful x-ray study. Cholecystography takes advantage of the physiological concentrating function of the gallbladder, and a dye is given either orally or intravenously, which is known to be excreted by the liver. The dye most often used I believe is, tetra-iodo-phenolphthalein. This dye collects in the gallbladder and becomes cencentrated during the period of fasting and the cholecystogram shows a definite outline of the gallbladder, its size, shape and position, any irregularities and, if stones are present, definite shadows of varying density may be seen. A fat meal of cream or the yolk of an egg is given and in three hours another picture is taken to show the rapidity of emptying; if stasis is present another picture should be made at the end of six hours after the fatty meal, to determine whether stasis is still present.

The contraindications to cholecystography are decompensating heart disease, extremely high blood pressure and acute infections of the gall-ducts. These cases are liable to react severely to the injection of the dye and it is not considered advisable. In cholecystography the positive indications of pathology are: Non-visualization of the gallbladder; faint visualization of the gallbladder; delayed appearance of the gallbladder shadow; deformity of the gallbladder: cholelithiasis: persistence of the gallbladder shadow; excessive size of the gallbladder. Lack of time forbids a discussion in detail.

Treatment of Cholecystitis: The non-operative treatment consists of a rigid diet, omitting those articles of food which burden the liver, such as fats, greasy, fried foods and sweets. Medical treatment consists in giving

those remedies which supposedly thin the bile and prevent stasis, such as phosphate of soda and some of the bile salts.

As to the so-called, "non-surgical drainage of the gallbladder," I refrain from expressing my opinion freely as these notes will probably be published, and will simply say that it is *no good.*

The surgical treatment of choice, in the majority of cases, is removal of the gallbladder; of course there are exceptions, and one must use surgical judgment here as in dealing with every surgical problem, each case being decided upon its individual merits. There are cases in which drainage is indicated and there are definite indications and contraindications for and against the removal of the gallbladder.

For several years I have made it a practice to have sections made from the walls of gallbladders removed in my clinic, and a microscopic study of these sections shows that the lymph channels and other spaces in the subserosa are choked and filled with leukocytes and connective tissue cells. I have often heard Dr. Deaver of Philadelphia say that "once a gallbladder is infected always infected." Without desiring to be too dogmatic, I will say that in my opinion once a gallbladder is diseased, it never fully recovers, and a diseased gallbladder is not an asset but a liability.

Dr. L. M. Blackford, Atlanta: Of 286 consecutive colored patients recently studied by me at Grady Hospital, about 280 of whom showed oral infection, gallbladder disease was suspected in only four, which is about the incidence at necropsy. I would like somebody to tell me why gallbladder disease is less common in negroes.

Dr. Frank K. Boland, Atlanta: Based on the experience of the British surgeon, McCarrison, in India, during nine years, he was greatly surprised to find no cases of appendicitis, gallbladder disease or peptic ulcer, although he performed about 4,000 surgical operations during that period. This is striking compared with the experience of any surgeon in Georgia, where in 4,000 consecutive cases probably 50 per cent would be appendicitis, gallbladder disease or peptic ulcer. McCarrison decided that the lack of these diseases was due to the diet of those people. Those living in northern India eat only nature's food, nuts, vegetables, milk and eggs, with very little meat and only a small amount of sugar. The amount of sugar consumed in a town of 30,000 inhabitants in a year was less than that used in a large New York hotel in one day. Their food was as close to nature as possible. The food was not sterilized and frozen to allow it to be kept and shipped great distances as our foods are today. He believed this was the explanation of the absence of these diseases. As we know, our negroes come nearer eating those foods than we do. They prepare the fancy foods for us, but when they sit down to eat, they eat cabbage and corn pone and plain foods. I believe that explains appendicitis, gallbladder disease and peptic ulcer being so infrequent among the negroes. I know from comparison in the Grady Hospital groups that these diseases are four times as common among the white patients as among the negroes.

Dr. A. A. Barge, Newnan: I have been much interested in this clinic and the discussion, and while I do not operate myself I do refer all cases that I think should be operated upon to a surgeon. I do not agree with those physicians who claim that a very large per cent of cases of cholangitis and cholecystitis are surgical cases. Since March 1891 it has been my lot to treat many cases of cholangitis and cholecystitis with very satisfactory results. In all these years I can recall but two patients who went under the knife, and they both recovered. One symptom frequently met with in these cases has not been mentioned and that is referred pain in the left hypochondrium. These patients complain of having colic, indigestion and pain in the left side. On examination no tenderness can be found where the pain is said to be located, neither will pressure over the spinal nerves on the left side cause pain, but pressure over the gallbladder will cause pain in the place complained of by patient with decided tenderness on pressure over the gallbladder.

Treatment is as follows: If indicated give patient on empty stomach 20 grains of calomel followed by a large glassful of water in which has been dissolved a level teaspoonful of bicarbonate of soda; best to give the calomel at bedtime, and allow patient to take nothing but sodawater during the night. First thing next morning on waking give a full dose of castor oil with a level teaspoonful of soda in it, or if preferable a full dose of Epsom salts dissolved in a large glassful of sodawater; if indican shows strong give Pluto water since the sodium sulphate in it acts on the small intestines, and gives best result. No food in any form whatever after taking the calomel until the purgative following has acted at least twice, and then very little and it light, for several hours. The soda prevents changes in the calomel as it passes. Next day after the calomel and purgatives have acted begin with the following: Three tablets followed by a cup of hot water night and morn-

ing. Each tablet composed of the following: Sodium Salicylate grs. 1½, Sodium Oleate grs. 1½, Sodium Choleate gr. 1, Phenolphthalein gr. 1/3, and Menthol gr 1/10. Give at same time two five grain tablets Sodium Salicylate aromatic (Tilden) followed by a glassful of water after each meal. The bile-salts stimulate the liver and next to the bile-salts comes sodium salicylate as a hepatic stimulant, keeping up a free flow of bile and preventing inspissation of the bile, and increasing the bile's antiseptic power.

Dr. C. W. Roberts, Atlanta: I wish to know the significance of the scar in the lower right quadrant in the case reported by Dr. Rozar.

Dr. A. R. Rozar, Macon, (closing): I stated in the history that the patient had had her appendix removed some four or five years before. Probably she had gallbladder disease at the same time which was overlooked.

In explanation of Dr. Barge's question, I think the pain was doubtless due to infection of the hepatic duct. I hope his medicine will cure the patient, but fear she will later come to surgery.

Dr. T. C. Davison, Atlanta, (closing): In regard to the negro and Dr. Boland's explanation for not having such frequent evidences of those diseases in the colored race, the explanation is simple: they live more simply and exercise more in their work.

As Dr. Barge said, many patients can be treated medically, and some of them go on year after year, but many of us see these patients come back with empyema of the gallbladder, or other serious conditions, perhaps with a severe attack in the middle of the night. These difficulties do not come about suddenly, the history extends over many years. I dare say Dr. Barge's patient still has an infected gallbladder, which I hope will never give any serious trouble.

MYCOSIS FUNGOIDES*

Clinic

G. Y. MASSENBURG, M. D.

Macon

I am presenting this case today because of the infrequency of the condition, and because it is the only case that I or any of the members of our hospital staff have ever seen. The condition is usually termed mycosis fungoides or granuloma fungoides, but is sometimes called sarcomatosis cutis and malignant lymphoma.

Presentation of patient: On May 1, 1928, this young lady, aged 19 and single, came to me because of two unusual skin lesions on her legs. This was her only complaint, aside from attacks of epilepsy.

Her family history is entirely irrelevant, and she had been quite healthy all her life until the onset of epilepsy four years ago, which has increased in severity and frequency of attacks. She had "ground itch" as a child. Two years ago an eruption appeared on the skin of her face which appeared to be acne.

When she consulted me she stated that for some weeks she had had small areas of eruption over her body and legs, which seemed of little consequence. Five weeks previously there appeared on the left anterior aspect of the left leg a small lesion that *at the time seemed very insignificant. It began as a vesicle* that enlarged but slightly for a period of two weeks. It then took on more rapid growth and spread symmetrically from the center until it almost completely encircled the leg. It had pained considerably for the past three weeks and when first observed by me was about five inches in diameter. Two weeks before she consulted me a lesion appeared on the right leg, which had grown quite rapidly and had become quite painful.

Aside from some constipation there was nothing else of importance in the clinical history.

Physical examination revealed a well developed, and well nourished young female, weighing 124 pounds, which was about six pounds less than her average weight. Her pulse was 88, her temperature 99 degrees F. The left tonsillar lymphatic gland was enlarged; the other lymphatic glands were not palpable. The examination of the head, neck, thorax and abdomen was negative. Pelvic examination was not made. The blood pressure was 120-80.

Inspection showed two large lesions on the legs, the largest one about five inches in diameter, situated on the left leg. It was circular and extended almost completely around the leg, just below the middle third. There were numerous elevated plaques over this area, which were about one-half inch in diameter. They were confluent, purplish-red, more marked around the periphery and seemed to have diminished in size somewhat in the center. On pressure many droplets of pus, the size of a pinhead, exuded from these elevations. There was an area of acute, inflammatory swelling surrounding this area for about three-fourths of an inch. On the right leg

*Informal clinic before the Medical Association of Georgia, Macon, Georgia, May 8, 1929.

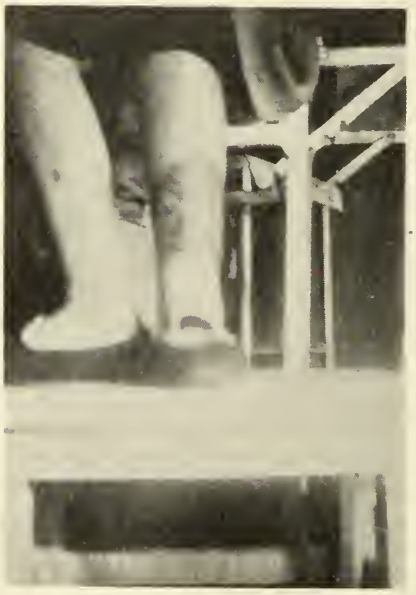


Figure I

The first or parent lesion on the left leg.

Figure II

A secondary lesion on the right leg, one of seven or eight that developed subsequently.

there was a similar lesion about two inches in diameter.

Laboratory findings: The urine and stools were negative. The blood showed 65 per cent hemoglobin, red cells 3,860,000, white cells 13,400. The differential count revealed polymorphonuclears 66 per cent; eosinophiles 1 per cent; basophiles 3 per cent; lymphocytes 30 per cent. The Wassermann reaction was negative.

A section of the lesion was removed and examined by Dr. A. E. Thayer, then pathologist at the Macon Hospital. He reported the lesion to be mycosis fungoides.

Because of the malignant character of this condition and the very poor prognosis as reported in the literature, I felt that no treatment could be too radical. Since the x-ray and salvarsan have offered the most benefit, and because in some cases when the parent lesion was especially attacked with the x-ray the other lesions have shown some improvement, I deemed it not unwise to do a complete cautery excision of these two lesions, giving salvarsan and roentgenotherapy as well.

On May 9, 1928, a cautery excision was done under gas-ether anesthesia, and the raw area was treated with Dakin's solution for several weeks. A series of six injections of 0.6 gm neo-salvarsan were given at weekly intervals, and also a series of x-ray treatments over the area at weekly intervals for six weeks. Skin grafting of this area was then done, with a very pleasing result, and the wound entirely healed.

Aside from swelling of the leg on walking she got along very nicely until November, when she fell in an epileptic seizure and burned her right leg and foot in the fire. This burn was rather difficult to heal but we finally got a good result and it remained healed for two months.

Following the cautery excision of the lesion in May 1928 the patient seemed entirely free of the disease until March 5, 1929, when she noticed a "blister" on the margin of the scar of the original lesion on the right leg, followed by a small sore which did not heal. Two weeks ago it took on a very rapid growth, and the appearance of the original lesion.

Three weeks ago there developed eight or nine small lesions on the left leg, which have also increased rapidly in size and have assumed the appearance of the parent lesion. She has complained bitterly of pain. Minute droplets of pus exude on pressure from the surface of these lesions.

I gave her one intravenous injection of 0.6 gm neo-salvarsan and repeated it one week ago. She has also received an x-ray exposure of two skin units to each of these lesions on the same days. After the first x-ray treatment and injection of Neo-salvarsan the lesions became less painful and seemed to stop progressing, and she has shown considerable improvement. The first lesion and the largest, however, has not shown the improvement of the secondary ones.

DISCUSSION ON CLINIC OF DR. MASSENBURG

Dr. Howard Hailey, Atlanta: I question the diagnosis of mycosis fungoides in this case. The history, the appearance of the lesions and the physical condition of the patient fit in with a case of blastomycosis. The severe pain speaks for blastomycosis. The absence of pruritis is against mycosis fungoides. I would like to know whether the pus has ever been examined for blastomyces. As in tuberculosis, repeated examinations are often necessary to find the organism. The diagnosis of mycosis fungoides from tissue examination can be made by an expert in skin pathology. If the blastomyces have not been found, the patient should be given the benefit of the therapeutic test—large doses of iodide of potassium by mouth. A 50 per cent alcoholic solution containing 0.5 per cent iodine should be used locally as a varnish each day. This should be done before further surgical procedures are undertaken. Additional x-ray therapy should be avoided.

Dr. G. Y. Massenburg, Macon, (closing): Blastomycosis was suspected in the beginning. Dr. Thayer examined particularly for blastomyces, and at his suggestion we took a piece of the tissue for his examination. I had every one in the Bibb County Society see the patient, I think, and all the men on the staff of the hospital, for I did not know what it was. Unfortunately, Dr. Thayer has left and he took the specimens with him. He reported that no fungi of any sort were found, and nothing other than the skin infections one would expect to get.

I am reporting the case as one I have never seen the like of. I know nothing about the condition but have a short synopsis from a paper by Dr. Joseph C. Bell, of Louisville, Kentucky, that I would like to read. According to Bell, granduloma fungoides, also commonly termed mycosis fungoides, is a chronic malignant disease, of which there are two distinct types; one having prefungoid manifestations followed by the fungoid stage, and a second type where the prefungoid period is almost entirely or entirely absent, and in which the first manifestation is the appearance of fungoid tumors.

In the first type the initial evidence of the disease is the appearance of a reddish scaling eczema-like lesion on some part of the body. This may undergo spontaneous involution, but it is soon followed by similar lesions. These generally spread until they may involve the greater part of the body surface. This stage may last for a few weeks or for years.

There then follows the second stage during which the lesions become indurated, elevated, and their surfaces rough, furrowed, and dark red in color. The duration of this period is variable. It is followed by the third stage.

In this stage tumors appear. They may vary from the size of a pea to that of a hen's egg, or may be larger. Soon their surfaces begin to ulcerate and to exude serum and purulent material. The tumors then present a mushroom-like appearance, and the typical clinical picture of the disease is seen. These tumors increase in size and number and the patient gradually wastes away or dies of an intercurrent infection.

The course of the disease may be long, lasting as many as fifteen years, or it may be very brief, extending over only a few months.

Pruritus is almost always present in all stages, and during the first two stages may be the only symptom, the patient being singularly free from constitutional manifestations other than this.

The etiology of granuloma fungoides is unknown. It bears no known relationship to syphilis or to tuberculosis, and there is no evidence of a hereditary tendency or of its being contagious.

The pathology of the disease is a much disputed question. Cases clinically typical of this condition have shown metastatic lesions in all parts of the body which were characteristic of those seen in lymphosarcoma. A few cases have shown a blood picture typical of lymphatic leukemia; but in the majority the blood picture has been normal or a leucocytosis has been present, with a predominance of the polymorphonuclear cells. The lesions of the skin usually show a thinning or destruction of the epidermis and a dense round cell infiltration of the corium. Stellwagon and many other students of this disease consider it a type of granuloma. Others believe it to be a form of lymphosarcoma.

The diagnosis in the fungoid stage offers no great difficulty to one familiar with the disease; but during the first and second stages the diagnosis may be very difficult or at times impossible. It is frequently diagnosed eczema, psoriasis, etc.

Various forms of treatment have been used, including arsenic, salves, arsphenamin, etc. MacKee says that the roentgen-ray and radium are now recognized as the most efficacious measures at our disposal. No permanent cures have been reported following this form of treatment, but in a number of cases the disease has been kept under control and the patient essentially symptom-free for several years, one as long as fifteen. However, in all cases a time comes when the tumors reappear and the roentgen-ray will no longer cause their involution.

PERNICIOUS ANEMIA*

Clinic

T. E. ROGERS, M. D.
Macon

Presenting Patient: I wish to call your attention to this patient, a white male, aged 36, a carpenter by occupation, who was admitted to my service in the Macon Hospital on January 1, 1927. His complaints were general weakness, more marked in the lower limbs, pain and tingling sensation in his legs. His family history is unimportant, except that his mother died at 60 years of age as the result of some "stomach trouble," and one brother died in an insane asylum at the age of 25 years. He had had slight bleeding from hemorrhoids and alternating constipation and diarrhea for the preceding six months. For two months he had had some dyspnea on exertion, with slight edema of the feet and ankles. His tongue and mouth had felt raw and sore for six months. During his infancy he had a severe attack of pneumonia and when twenty-one he had an attack of pellagra which lasted for six months. Aside from this he had always felt strong and well until six months before. Ten or twelve years ago he drank a small amount of alcohol for a period of two or three years, but has had none since. He smoked in moderation until two or three months ago, when he was forced to stop on account of its burning and hurting his tongue.

The patient was reared on a farm in southern Georgia and has never lived outside of the southern or middle portions of the State. He has had no digestive disturbances and there is no history of venereal diseases. He has been married for five years; his wife has had two children, both living and well; there is no history of miscarriages or stillbirths.

Physical examination showed a fairly well nourished, but pale and anemic male, with a slight lemon tint to the skin. The mucous membranes and conjunctivae were anemic. The scalp was partially bald and the hair looked dead. His ears, eyes and nose were apparently normal. The eyes reacted to light and in accommodation. The tongue was raw and beefy in appearance. Several teeth were missing; there were several fillings and a few cavities in the ones that remained. Examination of the heart showed the apex one-half inch inside the nipple line in the fifth interspace. A soft, systolic murmur was heard over the base and along the left sternal border. The lungs were negative, and except for rather flabby musculature the abdomen was normal. The spleen was barely palpable. The reflexes and coordination were apparently normal. No glandular enlargement was noted. There was moderate edema of the feet and ankles.

Laboratory examination showed the urine to be negative, and the stools negative for ameba and ova. The stomach contents following a test meal showed no free hydrochloric acid. Examination of the blood revealed 1,100,000 red cells, 2,450 leukocytes, hemoglobin 25 per cent. The differential count was: polymorphonuclear neutrophiles 26 per cent; eosinophiles 7 per cent; small lymphocytes 48 per cent; large lmphocytes 19 per cent; megaloblasts 1 plus; anisocytosis 2 plus; poikilocytosis 3 plus; polychromatophilia 2 plus, blood Wassermann was negative.

The temperature ranged from 99 degrees to 100.1 degrees F. for the first two weeks he was under observation, after which it remained normal.

In view of these findings a diagnosis of pernicious anemia was made, and the patient was given a diet of liver with vegetables and fruits, as suggested by Minot and Murphy, with twenty drops of hydrochloric acid after each meal. In fifteen days his red blood count had increased to only 1,250,000. He was then given a blood transfusion of 500 c.c., which increased the red blood count to 2,000,000. The liver diet was continued and after that the red cells increased rather rapidly. On January 29, 1927, he had 4,000,000 red cells, with 80 per cent hemoglobin, and a practically normal blood picture. No reticulocyte counts were made on that admission, and he was discharged from the hospital on January 30, 1927.

He remained in Macon for three or four months, continued the liver diet and got along well. Then he moved to the country and for financial reasons as well as others stopped the liver feedings. He soon began to lose strength and go backward. The redness began to disappear from his cheeks, the dyspnea, edema of the ankles and numbness of the lower limbs gradually returned, and in September, 1927, he was re-admitted to my service in about the same condition as when first seen. His red count was 1,500,000, with a reticulocyte count of one-half of one per cent. He was immediately put back on liver diet and in ten days the red count had reached 2,225,000, with a reticulocyte count of 5 per cent. He was then transferred to the Veterans' Hospital at Lake City, Florida, where he continued his diet and got along fine. After leaving there he went through the same experience—left off his diet and had

*Informal clinic before the Medical Association of Georgia, Macon, Georgia, May 8, 1929.

to go back. He has repeated this procedure five times in the past twenty-eight months, the improvement persisting for three to four months after stopping his diet each time.

His last admission to my service in the Macon Hospital was on March 16, 1929. His red count then was 1,200,000, hemoglobin 45 per cent, and six-tenths of one per cent reticulocytes. He developed an erysipelas of the right leg three or four days after admission, which interfered with his treatment for a week. Following that he improved nicely and ten days later his red count was 2,000,000, with 7 per cent reticulocytes. He was discharged from the hospital on April 20, 1929, with a red blood count of 3,500,000, and hemoglobin 75 per cent.

One of the interesting points about this case was the apparent lack of improvement on his first admission until he was given a blood transfusion as contrasted to the rapidity with which he improved following the transfusion. With a similar experience in another case, it seems to me that it is still good treatment and a time-saving procedure to give blood transfusions at the beginning of treatment, especially in the markedly anemic cases, as we did before the days of liver diet. Another interesting feature about the case was the rapidity and regularity of the relapses when he would discontinue the liver diet. We know the nature of pernicious anemia is to relapse and remit, but usually not with such regularity as was exhibited in this case. His improvement lasted only three or four months each time.

DISCUSSION ON CLINIC OF DR. ROGERS

Dr. V. P. Sydenstricker, Augusta: This patient of Dr. Rogers exemplifies what we know as pernicious anemia, and his appearance also exemplifies this. His color is even redder than normal. This is an interesting point in the case, that before the red count in these cases comes back to normal the patients assume this plethoric appearance.

Pernicious anemia must be differentiated from other types in which there is an excess of hemoglobin in the blood cells, particularly the type accompanying pregnancy and those associated with intestinal parasites. Bearing in mind the age and race the diagnosis is not difficult. It is rare in negroes. The anemia is variable, the red count usually being between 1,000,000 and 1,500,000. The patients usually feel pretty good until they reach this point. They may have some gastrointestinal disease, or some hepatitis, and usually the hemoglobin is around 35 per cent.

The blood itself is somewhat characteristic, and with some experience one is not apt to mistake it for other conditions. The low hemoglobin, the predominance of the large cells, the concomitant reduction of leukocytes with the polymorphonuclears advanced, the increased platelets and increased resistance, are all helpful in the diagnosis.

Dr. E. C. Thrash, Atlanta: In the Journal of the American Medical Association two or three weeks ago there was a report from some of the Harvard men who have been doing some experimental work on the liver, and have obtained some extractives from it that are producing about as good results in glycosuria as insulin is giving.

I would like to ask if there has been any pancreas feeding in this case, as in the liver feeding. There might be some relation between the feeding of pancreas in pernicious anemia, just as there is a relation between the liver feeding and glycosuria.

Dr. V. P. Sydenstricker, Augusta: Replying to Dr. Thrash, I have heard of no experiments in which pancreas feeding was resorted to, although pancreas feeding is of some benefit in pernicious anemia. It ranks fifth or sixth, I think, in the list of things that are of assistance in these cases.

HEART SEPTAL DEFECT*

Clinic

W. C. Pumpelly, M. D.
Macon

Presenting Patient: This gentleman has, near the sternum, an area of visible pulsation, and there is a murmur and thrill. One immediately thinks of aneurism, but this area of visible pulsation is in the second interspace to the left of the sternum. The gentleman has no complaint. He came to me requesting a physical examination because he wished to apply for a pension. He is thirty years of age, married and has one child. Both his wife and child are in good health. His family history is unimportant. He seems to have been strong and well as a child. During childhood he had measles but he did not have scarlet fever or diphtheria. Fifteen years ago his tonsils were found to be diseased and were removed. In 1918, while a soldier in France, he was both wounded and gassed. Eight years ago he was told that he had pulmonary tuberculosis; he was then quite debilitated and had lost twenty pounds in weight. Three years ago he was in a railway accident, when his back was injured but no bones were broken.

*Informal clinic before the Medical Association of Georgia, Macon, Georgia, May 8, 1929.

There is no information obtainable suggesting a luetic infection. Ten years ago he was told that he had a heart murmur.

His height is 173 centimetres, (5 feet and 8 inches); his weight 53 kilogrammes, (117 pounds). You will notice that his nutrition is fair, his color is good, his breathing is normal and there is no cyanosis. There is no clubbing of the fingers or other maldevelopment.

There is a little dullness in the left apex and the left lung expands a little less than the right. Expiration in the left apex may be a little prolonged but pathognomonic rales are not apparent on expiratory or succession cough. Under the fluoroscope the left apex seems a little more dense than the right and on cough does not flash quite so well. The brachial vessel walls are palpable but compressible and the retinal vessels are not unusual. He has a long chest. In the second left interspace near the sternum there is an area of visible pulsation. In the fourth interspace 8.5 cm. from the mid-sternal line an apex impulse is visible. These impulses are synchronous. The first sound at the apex is clear; the aortic second sound in the second right interspace is clear, but faint rather than loud. Over the second left interspace, at the area of visible pulsation, there can be heard a prolonged systolic murmur and a loud diastolic reduplication. On palpation over the fourth interspace, where the apex impulse is visible, there is a faint impulse, while over the second left interspace a systolic thrill and a diastolic shock can be felt. The systolic murmur, though loud, is not transmitted. The blood pressure, is sytolic, 122; diastolic 72, the same in both arms. The Wassermann reaction is negative.

On the fluroscopic screen the heart appears not unusual. A chest film with heart measurements is presented. There is considerable hypertrophy of the left heart, though the film was made at thirty-six inches and is not absolutely accurate. The measurements are: LD-17.5 cm., TD-13 cm., ML-11.5 cm., and MR-4 cm. For his age and weight the measurements should be LD-13.5 cm., TD-11.4 cm., ML-7.5 cm. and MR-4.3 cm.

I venture the diagnosis of septal defect, which I think is probably a defect of the interventricular septum, though Barker (1) says: "Patent interventricular septum and patent foramen ovale, are defects that rarely occur singly, and the diagnosis may be difficult to establish intravitam."

This diagnosis of septal defect is predicted, primarily, on the proposition that a systolic murmur which is not heard at the apex is not of mitral origin and must be explained in some other way than occurring at the mitral orifice. There may be a defect of both auricular and ventricular septums or, perhaps, patency of the foramen ovale. Of course, patency of the ductus arteriosus is always a possibility and cannot be overlooked. As there is no evidence of embarrassment of the pulmonary circulation, the signs are not due to a lesion of the pulmonary valve, and surely such a picture is not that of acquired heart disease.

Hirschfelder (2) says: "The diagnosis of defect in the interventricular septum can be made only when, in the absence of cyanosis or other signs of congenital heart disease, the vigorous pulsation of the right ventricle is seen in the second left interspace, and both the peculiar murmur of Roger and the accentuated second pulmonic sound can be heard." The murmur described by Roger (3) in 1879, is: "A remarkably intense murmur corresponding with an extensive thrill which coincides with it."

Defects of the interventricular septum occurring alone seem to be extremely rare. Cabot (4) says: "In 4,000 necropsies, which included a good many children, there were only three cases of septal defect between the ventricles." The ages of these cases were 9, 19 and 49 years.

REFERENCES:

1. Barker, Llewellys F., Monographic Medicine, D. Appleton and Co., 1916, p. 196.
2. Hirschfelder, Arthur D., Diseases of the Heart and Aorta, J. P. Lippincott Co., 1913. p. 536-7.
3. Roger, H., Recherches cliniques sur la communication des coeurs par inocclusion du septum interventriculaire, Bull. de. l'Acad., de Med., Paris, 1879. Ser viii, t.ii, 1074-1189.
4. Cabot, Richard C., Facts on the Heart, W. B. Saunders Co., 1926, p. 761-68.

DISCUSSION ON CLINIC OF DR. PUMPELLY

Dr. Hal M. Davison, Atlanta: The diagnosis of this case will not be discussed, since we can add nothing to the excellent presentation. It is true that we should arrive at an accurate diagnosis whenever possible, and also determine the actual cause of the disease, since the treatment, the course of the disease, and the prognosis are all modified by these two factors.

I wish to discuss this case from the standpoint of the responsibility which doctors bear in the treatment of cardiac conditions. A large part of the responsibility of the medical profession in treating heart diseases lies in the forming of a correct prognosis. Here is a man who has come to a doctor for examination, with no complaints of a cardiac disorder. The doctor finds the condition that he has described to you. What shall he do

about it? Must he ignore the condition? Shall he tell the patient about it? Is there a definite treatment necessary? Shall the patient return for re-examination, and if so, at what intervals? If the patient is told about his trouble, he must be made to understand exactly what the doctor means to convey, since many patients with a very mild cardiac disorder, or even no cardiac disease at all, develop marked cardiac neuroses. This must, by all means, be avoided.

Often we see both men and women whose lives have been practically ruined by the fear of cardiac disease. This is most often begun by some physician who tells the patient that he has cardiac disease or that he has a heart murmur. He may have neither, and very often does not. On the other hand, we see patients who are near death, and who refuse to take treatment, because they have never had the condition sufficiently well explained, or an examination that they considered sufficiently thorough to diagnose the case. I have recently seen a man aged 55, who has been suffering for some months with very definite and moderately severe attacks of angina pectoris, and who absolutely refused to stop his work, although he has been to several doctors.

When we were students, any patient who complained of symptoms referable to the heart, and who presented a murmur, was considered to have a cardiac disease, and all such patients received digitalis. At present, we must prove that a murmur means disease. On the other hand, we must not overlook the cardiac condition which gives a definite diagnosis, prognosis, and definite prohibitions in life for our patients.

Frequently, we must settle the following questions:

A young man says that he has had a diagnosis of cardiac disease, and wishes to know if he may marry. A female with cardiac disease wishes to know if she may marry; or, if she be already married, if she shall allow herself to become pregnant; or, if she is already pregnant, if the pregnancy should be interrupted, or can she, as an expectant mother, carry on safely through a delivery. Both boys and girls ask if their cardiac condition will permit them to attend college, if their condition will allow their engaging in athletics, or if a certain profession or occupation is permissible. Further along in life, the question of a man's or woman's retiring from business or profession because of a cardiac condition must be settled.

A mistake in our advice may cause the early death of a cardiac patient, who might have lived long and comfortably under proper care. On the other hand, a mistaken diagnosis of cardiac disease may ruin a career in business or profession for a patient who may prove to be perfectly healthy, and who has been suffering from a cardiac neurosis only, or who has had a diagnosis of cardiac disease without sufficient evidence to justify it.

The doctor must not shirk this responsibility. He must be sufficiently well educated to be as accurate as circumstances will allow, and he must permit neither his emotions nor his sympathies to prevent his advising accurately about these matters.

The American Heart Association is now attempting to standardize diagnosis in cardiac disease by certain criteria of examination and by tests which may be used in determining the type of advice necessary. Clinics for diagnosis and treatment of cardiac disease are being established all over the country. Social workers to follow up patients in the home and at their work are usually attached to the clinics. Bureaus are being established to assist in finding proper occupations for cardiac patients. Every physician who is interested in cardiac work should belong to the American Heart Association and help carry forward this work.

The burden of responsibility can never be shifted from the physician who is doing the family practice, because he is the man in whom both the patient and the family trust most. We must accept this responsibility and serve it well.

HEART CASE*

Clinic

James A. Fountain, M.D.

Macon

The patient is a male 51 years old. His occupation is clerical work. The family history is negative. He has had measles, whooping cough, scarlet fever and smallpox with no complications or sequelae. Occasionally he has an attack of sore throat, but there is no history of rheumatism. In 1893 he had a small sore on his penis for a period of approximately ten days. Three Wasserman tests have been negative. He smokes about twenty cigarettes daily and does not drink alcohol. Until four years ago his working hours were from eight until six. Four and one-half years ago he began to feel tired and slightly short of breath. He consulted a physician and was told that he had high blood pressure but no sign of heart disease. At that time his blood was 200 systolic. Four years

*Informal clinic before the Medical Association of Georgia, Macon, Georgia, May 8, 1929.

ago he had a stroke of paralysis which occurred at night. This produced a paralysis of the right arm and leg, and the right side of the face. The paralysis cleared up after two weeks in the extremities but the facial paralysis persisted for several months. There is a slight evidence of impairment of the facial muscles at present. Following this attack he enjoyed good health until two years ago, when he consulted me because of shortness of breath. This was due to decompensation of the heart following a slight attack of la-grippe. At that time his blood pressure was 245/135. After recovering from this attack, he was comfortable and worked regularly until February of this year when he had an attack of bronchitis which kept him in bed for two weeks. Since this attack he has been unable to walk any great distance without being very short of breath and getting very weak in the legs. He has some difficulty in walking in the dark. There has been some change in his voice with slight difficulty in talking at times for the past few months. During the past two years his blood pressure has varied from 200/110 to 250/150. The patient has never complained of dizziness or vertigo, and there has never been any swelling of the extremities. Recently he has complained of palpitation of the heart, which was of short duration, and at times has noticed that his head moved with the heart beat. There is no history of digestive disturbance, and the urine has never shown any albumen. The red blood count is 4,000,000; white blood cells 6,500, and hemoglobin 70 per cent. His differential count is: polynuclears 65 per cent; small lymphocytes 30 per cent; large lymphocytes 5 per cent.

DISCUSSION ON CLINIC OF DR. FOUNTAIN

Dr. E. C. Thrash, Atlanta: This man is anemic, his bones stand out rather conspicuously, his respirations are embarrassed. There is a heaving in the area of the apex. The impulse is dynamic, no thrill is felt. At each impulse there is a drawing in of the abdominal wall just to the left of the median line, which causes one to think of adhesions in this area. The veins of the arms stand out prominently. A brachial pulsation can be observed along the full length of the brachial prominently. A brachial pulsation can be observed along the full length of the brachial artery. The artery is tortuous and one can see it projecting at each pulsation. I think I have never before seen such a pronounced projection of the brachial artery. In running the fingers over the brachial one seems to feel calcified plaques, but on deeper palpation we find this is tortuosity rather than calcification. This suggests hypertension. In palpating the glands we find very small, multiple epitrochlears. There is rather a large gland in the left axilla, but I was not able to find one in the right axilla. There are a number of small cervical glands, but none at the base of his skull. There is a soft puffiness at the base of his neck. We cannot account altogether for this, but it is usually due to stasis in the lymph system. This is seen especially in Hodgkin's disease or in melanosis, where there is pressure on the lymphatic circulation. It is one of the outstanding signs in metastasis in the upper thorax. There is still evidence of the facial paralysis. There is no sign of ataxia. The reflexes are markedly exaggerated, which is probably due to the highly nervous state in which the man is. He has rather a distressed facies. One of the outstanding findings is that he has at no time had any swelling of his feet, and no swelling or puffiness of his face in the morning, showing that he is not quite in the congestive stage.

The thorax, so far as the lungs are concerned, is comparatively negative, but the area of dullness corresponds almost exactly with the roentgenographic findings. You can all see the area of cardiac dullness marked out with ink. We have not had his vocal cords studied, but he has been hoarse from time to time.

The two great divisions of heart disease are the infectious, non-syphilitic, and the non-infectious not associated with syphilis. In studying heart disease we make this great division. In the infectious types we have the outstanding heart lesion resulting from rheumatoid infections. These are so outstanding that we have come to call this the rheumatic heart. Then the arterial types of infection, which are more acute and terminate more rapidly. The germs most commonly associated with these are the strains of streptococcus, usually the viridans or hemolyticus, and then the whole train of diseases brought about by the gonococcus, staphylococcus and through the whole gamut.

The syphilitic infections are the ones with which we probably have to deal more often, and particularly we have the hypertensive forms of cardiopathies, and those resulting from thyrotoxicosis. We will not go into the congential forms, including malformations and lesions of the interventricular septa and the ductus arteriosus.

As to symptoms, we have lesions where there are practically no symptoms. We may be able to determine them from physical examination, and in those cases we do well to

let them alone and not excite the patients unduly over their heart condition. When these cases manifest themselves they come on insiduously. The patient realizes there is something wrong and will probably go to various physicians, as this man did, and receive many opinions. Ultimately they reach the condition where they cannot carry on their work, they cannot function as they did in the past, and reach the condition this man has reached, where they cannot carry on their regular vocation. After that comes the congestive state. This man's legs may swell, his eyes may have puffy bags about them, he may get an abdominal distension with fluid, enlargement of the liver, and so on through the whole gamut.

These patients must be put to bed and kept there long enough for them to re-establish compensation sufficient to enable them to carry on their work. This man must have something done or he will soon get into the congestive state. He is on the verge of it now. He must have a long rest, with proper treatment, so as to get him into condition again.

Now as to the etiology in this particular case. The hypertensive heart is an important lesion in cardiopathies, and we must consider the hypertension as being a cardiopathy here. This man has no kidney lesion. Urinalysis has never shown anything particularly wrong, which is somewhat against a hypertensive lesion. Another thing that is important in arriving at the etiology is the presence of the enlarged glands. The inguinal glands are enlarged as well as the ones I have mentioned. There is apparently not much enlargement of the liver. He has noticed the enlargement of the inguinal glands for many years, and thinks probably for all his life. These findings would be somewhat against the diagnosis of a hypertensive heart. These cases may start out without much kidney complication, but kidney lesions almost invariably develop with them.

We must not forget the fact that the history revealed a small genital lesion of short duration. Such lesions often appear without the patient's knowledge. Spirochetes are motile and may burrow into the tissues rapidly, without leaving anything except a small nodule, which may not break down the tissues at all. We must bear this in mind.

Another thing is that in checking up many hundreds of cases of cardiopathies my experience has been that the Wasserman reaction is almost invariably negative.

Dr. George L. Echols, Milledgeville: I would like to know whether a syphilitic endarteritis should not be considered, and whether cerebral arteriosclerosis should not receive as much or more consideration than the hypertension.

Dr. E. C. Thrash, Atlanta, (closing for Dr. Fountain): In reference to arteriosclerosis, this is not the entire cause of this man's lesion, in my opinion. There is something else back of it. I think the point is well taken by Dr. Echols that there is probably a cerebral lesion in the case from cerebral arteriosclerosis. The man's aorta is much enlarged, bordering on an aneurysm. The heart also is enlarged. There is a loud, harsh murmur heard with the second sound of the heart just to the left of the median line, about the second and third interspaces. This murmur is transmitted over the liver, is heard plainly at the apex and is transmitted to the root of the neck. There is a murmur heard with the first sound of the heart, chiefly at the apex. The blood pressure findings as I gave them before are important.

My diagnosis in this case is a syphilitic heart and vascular system, involving largely the aorta and the heart. There is mitral regurgitation and a slight mitral stenosis. That is the reason why the pulse-pressure does not drop to 0 in this case. Where there is no stenosis and a slight lagging the pulse pressure will drop to 0 in many instances. That is because there is no resistance and the pulse pressure is maintained throughout systole. On the other hand, if there is a dilated aorta with an imperfect aortic valve there is a recoil, and there is narrowing of the excursion of the aortic contraction, and a low pulse pressure. This man's aorta has a range of nearly one-fourth inch in the dilation as the impulse comes on and then the recoil as the column goes back into the heart.

As to treatment, we have two drugs; mercury and potassium iodide given for the balance of his life will keep him in good condition. He should have rest and quiet for the next six months, remaining in bed most of the time. He should not be digitalized to enable him to go on with his work. That will bring about a false sensation of improvement. The heart tonic he needs is rest, with liberal doses of mercury and iodide.

The Southern Surgical Association will meet in Atlanta, December 10, 11, 12.

On page 392 is printed complete schedule of the President's Tour from Savannah to Miami, Florida, to attend the next annual session of the Southern Medical Association to be held at Miami on November 19, 20, 21, 22, 1929.

TWO CASES OF SCLERODERMA*

Clinic

C. C. HARROLD, M. D.
Macon

There are several reasons why I wish to present these two cases although they are not really in my line of work. The first reason is that the presentation of the first case affords me the opportunity to thank the Steiner Clinic in Atlanta, and the staff of the Grady Hospital for their great help and unfailing courtesy to me and to my nephew Dr. Thomas Harrold. For the past two years they have frequently, at great expense of time and effort, assisted us in making diagnoses, in outlining treatment and in helping to see that proper treatment was carried out. I do not think that the profession at large in the State appreciates in full the good work being done at the Steiner Clinic and the great boon it has become to poor people in our state who suffer from neoplastic diseases. I take great pleasure in publicly thanking the staff and in wishing for the Clinic increased growth and both public and private support.

Case 1: Miss K. is at present 37 years of age. The history of her present illness dates back to 1915, fourteen years ago, when she developed a depressed, painful area in her left thigh. When first seen by the late Dr. M. B. Hutchins in Atlanta four years later, in 1919, he reported that there was a firm, indurated, depressed, and pigmented area about four by six inches in size giving him the impression of a fibrosarcoma, with no bone involvement but with involvement of the muscles. Under ether he removed a "soft leathery fibrous mass" which the pathologist reported to be fibrosarcoma.

So far as I know, this patient saw no other surgeon until she consulted me five years later, in 1924. At that time she had a recurrence of the growth, with the involved leg more than one inch larger than the other. I believed it to be either a sarcoma or a myxoma and advised x-ray therapy. Under this treatment the limb rapidly diminished in size. This condition continued from March 1925, when I lost sight of her, until May 1926. At that time there was no evidence of recurrence, the involved left limb being smaller than the right, and her weight had increased from 123 to 140 pounds. It seemed to me that she was well. She was not seen by me again until seventeen months later, in October 1928. At that time her condition was practically as you see her today. The area of the old lesion in her thigh was replaced by a brawny induration with a definite small slough in the center. Her hands were drawn and stiff and the skin over her face was becoming tight. It was at this time that I advised her to allow me to send her to the Steiner Clinic for an opinion and advice, and to the Steiner Clinic is due the correct diagnosis of scleroderma. A section was made from tissue removed from the ulcer in the thigh and was reported by Dr. Bishop as "fibrosis cutis."

It is impossible in the short time alloted to these cases to discuss what is known of the symptoms and the pathology. I can only refer you to the best recent article which I have been able to find; namely, the reports of eight cases by Warfield Longcope in the first number and on the first page of the January 1928 Journal of the A.M. A. In the same article Dr. Christian of Boston reports an additional four cases. A few sentences from this article may be quoted.

"Almost nothing substantial is known about the etiology, the pathogenesis or the treatment."

"With the progressive thickening, hardening, smoothing and contraction of the skin, the prodromal pain and stiffness of the joints of the hands and feet may persist or increase. Movement becomes more and more limited as the skin hardens and the muscles stiffen, while all the joints, including even those of the neck and jaw, gradually grow more and more rigid. Finally the patient may become absolutely hidebound, and as inflexible as a wooden image." "Trophic disturbances of the skin—are common—Calcification of the skin with actual bone formation has been recorded."

Longcope does not believe that the thyroid has much to do with the disease, as careful estimations of the metabolism showed in his eight cases that in some cases the rate was high, in others low and in others normal. In the case under discussion the rate was plus 28. Under the circumstances I have not felt like giving this patient thyroid extract. If any of the doctors present have any sugges-

*Informal clinic before the Medical Association of Georgia, Macon, Georgia, May 8, 1929.

tions to make regarding treatment I wish they would make them to me after the meeting adjourns. The slides shown are supplied from the Steiner Clinic, having been made there.

Case 2. This young woman is a patient of the Steiner Clinic whom I have never seen before. She is presented to show the hand or finger type, that is the sclerodactyle. In this type the fingers show certain definite changes—but even the explanation of these is different. Christian, in the article above quoted states that the changes in the tips of the fingers are caused by direct pressure of the tight drawn skin on the terminal phalanges with resulting destruction. He does not believe that there are genuine metabolic changes here.

This patient is, as you see, a colored woman, aged 25. Her history dates back two years to increasing stiffness in the shoulders and arms which improved some under intravenous therapy. At the same time there has been an increasing stiffness in the fingers with the development of bulbous tips to several of them. At times her face feels tight and drawn. She has also had ulcerations on both ankles which have healed under intravenous treatment. Slides and photographs of this patient also show the characteristic facial expression and destruction of the tips of the terminal phalanges.

DISCUSSION ON CLINIC OF DR. HARROLD

Dr. Howard Hailey, Atlanta: As stated by Dr. Harrold, nothing definite is known about the etiology of scleroderma. Dittisheim reported eight cases of scleroderma found in seventeen consecutive cases of Graves' disease. This looks like more than a coincidence..

I think the most important thing, at this time, is the recognition of the disease. Scleroderma may be diffuse or circumscribed. When general the lesions are brawny and feel cooler than the normal skin. On palpation the skin feels fixed. There is no definite border to the lesions. The circumscribed cases are known as morphea. These lesions have a sharp border. In this type there is a pink or violaceous tint at the border of the lesion, which is due to telangiectatic vessels. One observer, Dr. Ayers, has reported the presence of arsenic in the urine in a series of cases.

Thyroid extract has given some improvement in all cases, which I have followed, when taken in large doses. The basal metabolism rate is not a sure guide to the patient's tolerance for the drug. Insulin has been reported as of great benefit, and Dr. Harrold might try this drug in his case. Scleroderma is most probably a tropic disturbance.

Dr. Dowman has met with success, in relieving patients with Raynaud's disease, by sympathectomy. This procedure may prove to be of value in selected cases of scleroderma.

Dr. M. Hines Roberts, Atlanta: Has any definite relation been established between the sclerema of the newborn and scleroderma?

Dr. T. C. Davison, Atlanta: Has iodid of potash been used in these cases?

Dr. C. C. Harrold, Macon, (closing): One of these patients has received iodid of potash, without improvement. The other has not.

The question of the thyroid has been gone into a good deal and the reports of Longcope from Johns Hopkins are very instructive. So far as I know, he was the first to carry out metabolism tests in these cases. He found that his patients who did not have low metabolism readings became definitely worse under thyroid medication, and therefore I have not tried it. The use of insulin I am glad to hear about, and I will discuss this with Dr. Hailey later on.

POSTOPERATIVE PULMONARY ATELECTASIS*

Clinic

C. H. RICHARDSON, JR., M. D.
Macon

The patient whose case I wish to report to you was a schoolgirl, aged 15, who was admitted to the hospital on February 22, 1929, complaining of pain and tenderness in the abdomen. Her illness began fifteen hours before her admission with generalized abdominal pain, most marked around the umbilicus. The pain was not relieved by the application of a hot water bottle and about 7:00 A. M. she took a dose of salts, which caused nausea and vomiting. The pain continued at intervals throughout the day, becoming localized in the right lower quadrant. Her family brought her to Macon during the afternoon, and a diagnosis of acute appendicitis was made.

She was a well nourished, tall, slender girl, who had always been well except for mumps, partussis and influenza as a child. There was nothing of importance in the family history. The urine was negative; the white blood count was 13,000.

An appendectomy was performed under ethylene-oxygen anesthesia on the day of admission. The appendix was acutely inflamed and the walls were thickened but there was no sign of suppuration or of any other

*Informal clinic before the Medical Association of Georgia, Macon, Ga., May 8, 1929.

pathology in the abdomen. The wound was closed in the usual manner, without drainage.

The patient was in good condition throughout the operation and reacted promptly. She had a comfortable night, without any morphia, and voided well.

The next morning her temperature was 99.3 degrees F., pulse 108, respirations 18. There was no nausea and she complained of no discomfort. At 8:00 p. m. her temperature was 102.2 degrees F., pulse 120, respirations 36, shallow. She complained of slight discomfort in breathing, and examination revealed scattered rales in both sides of the chest, most marked at the bases.

The following morning, February 24, at 8:00 o'clock the temperature was 103 degress F., pulse 130, respirations 24. The patient was very uncomfortable, had some dyspnea, and a dry, hacking, unproductive cough. A mustard jacket was applied and morphin and atropin given. Loud, coarse rales were heard in both chests and a diagnosis of probable pneumonia was made.

At 8:00 p. m. her temperature was 104.4 degrees F., pulse 126, respirations 32. She was distinctly dyspneic and slightly cyanotic. It was apparently an overwhelming pneumonia, but there were no areas of consolidation and no bronchial breathing. At 10:00 p. m. oxygen was administered, with some relief of the symptoms.

The patient spent a very restless night, talking at random and remaining dyspneic and cyanotic. At 8:00 a. m. on February 25 her temperature was 102 degrees F., pulse 138, respirations 34. A skiagram of the chest was made with a portable machine, which showed scattered airless areas throughout both lungs. The white blood count was 15,000, polymorphonuclears 78 per cent, at 4:00 p. m. The temperature was 100.3 degrees F., pulse 114, respirations 36. She complained of pain in the side.

At 8:00 p. m. her temperature had reached 103.3 degrees F., the pulse 134, respirations 28. At 11:00 p. m. the temperature was 104.3 degrees F., pulse 144, respirations 40. The patient was very ill, restless, cyanotic and dyspneic. Oxygen was given continuously, with some improvement of the symptoms. Atropin was continued and 1 c.c. of dialfoline was given by hypodermic.

On February 26 at 2 a. m. her breathing was very difficult; her temperature was 104.4 degrees F., pulse 138, respirations 36. At 8:00 a. m. the temperature was 102 degrees F., the pulse 120, respirations 24. About this time she expectorated a large quantity of thick mucus, and her condition improved at once. At 9:00 a. m. she took coffee with cream and sugar, seemed brighter and was much more comfortable.

By noon of that day her temperature had dropped to 100.2 F., the pulse was 108, respirations 28. At 8:00 p. m. the temperature was still 100.2 degrees F., pulse 120, respirations 26. She had continued to expectorate thick mucus through the day, and had improved considerably.

She had a good night, was able to take a soft diet in the morning, and by 8:00 p. m. on February 27 she seemed to be definitely out of danger. The temperature then was 100 degrees F., the pulse 104, respirations 24, and her convalescence from then on was uneventful. She was discharged from the hospital on March 5 in good condition.

At first the case was definitely regarded as one of pneumonia, but the physical signs did not fit into that diagnosis. The striking thing about the case is that at midnight the patient was apparently *in extremis*, and by 9:00 o'clock the following morning she was to all intents and purposes well.

DISCUSSION ON CLINIC OF DR. RICHARDSON

Dr. A. J. Mooney, Statesboro: The conception of Rehberger in 1922 of postoperative atelectasis was as follows: "A partial or complete collapse of the lower lobe of one or both lungs, with the appearance after twenty-four to thirty-six hours of the following signs, viz: rise of the heart, liver or stomach, or both; perhaps extension of the stomach tympany into the axilla; diminished breath sounds; distant bronchial breathing; altered voice sounds, diminished resonance and perhaps crepitation over the collapsed lobe or lobes; immobile lower thorax, and increased breath sounds over the upper lobes. Alarming attacks of dyepnea sometimes occur, lasting from a few seconds to hours."

Intensive investigations for the last five years have elaborated and perhaps, in some measure, have altered the above stated conception.

As to the incidence of atelectasis, there is a great diversity of opinion and facts. I sent a questionnaire to five representative leading surgeons and gynecologists of the South and received four replies. None of the four had had a case of pulmonary atelectasis in the last five years. One eminent gynecologist wrote that in thirty-eight years connection with a great, thoroughly organized, hospital there was one case of pulmonary atelectasis in the gynecological and obstetrical service.

On the other hand, William Pasteur in

1890 reported thirty-four cases, confirming the diagnosis by autopsy in several cases; also he found twelve cases of atelectasis in a total of 101 cases of lung complications.

Sir John Rose-Bradford during the late war found that 5 to 10 per cent of the chest wounds showed pulmonary atelectasis.

D. C. Elkin, in the April number of the Southern Medical Journal gives a very comprehensive review of the subject in a splendidly written article and presents seven cases.

A thorough study of the postoperative complications and systematic use of the x-ray will show a greater incidence and pulmonary atelectasis than is commonly supposed. A vast majority of the cases of so-called ether pneumonia will prove to be pulmonary atelectasis.

As to the etiology, opinion seems to be agreed on one thing, viz: the occlusion of the bronchus by mucus, a foreign body or growth. As to the origin of the mucus there is a diversity of opinion. If the condition was restricted to patients who had taken a general anesthetic, it would be very easy to ascribe it to the anesthetic; but it is seen after operations with local anesthetics as well. It occurs after trauma to the body or buttocks as well as after abdominal operations. Respiratory paralysis has been advanced as a cause, with good grounds. Probably the most reasonable theory and the most generally accepted is that it is a reflex nervous phenomenon. Personally, I am wondering if it might not be a form of allergy.

The mechanics of the condition is the blocking of a bronchiole or bronchioles with mucus and the absorption of the air distal to the obstruction. More males seem to be affected than females, probably due to the fact that females are costal breathers.

There is no special age incidence, although very young children are seldom affected unless they are far below par physically. It develops in from a few hours to six or seven days.

The symptoms are restlessness, slight dyspnea, with a tendency to increase rapid respiration; rapid pulse; generally more or less cyanosis, depending on the area of atelectasis; temperature from 99 degrees to 102 degrees or 103 degrees F.; a tendency generally to "curl up" or lie on the affected side; there is a cough with no expectoration until improvement sets in, when the mucus is expectorated.

Physical signs as laid down by John-Bradford are as follows: "The cardiac impulse is greatly displaced toward the affected side laterally and upward, the lateral being greater. The diaphragm is on a high level on the affected side as can be demonstrated by percussion and the x-ray; also the diaphragm is immobile on the affected side. The ribs on the affected side can be seen and felt closer together, and the side is immobile. On percussion, dullness marked in amount may be present up to the level of the clavicle.

"In the left axilla, because of the altered position of the diaphragm, resonance to an abnormally high level is present. Tactile vocal fremitus is either diminished, absent or increased. If diminished or absent, the breath sounds are diminished or absent; if increased, the breath sounds are tubular or amphoric in character and bronchophony and pectoriloquy are exceedingly well marked. The difference depends upon the relative patency of the bronchial tubes. The physical pulmonary signs present a considerable resemblance to the well known signs of consolidation."

As regards cardiac displacement, Boland and Sheret in the Lancet (7-21-28) state that in a series of cases studied only 1.3 per cent showed marked clinical evidence of cardiac displacement. This percentage of the incidence of cardiac displacement is at variance with most of the writers whose articles I have reviewed, and cardiac displacement must be considered as a very valuable symptom.

The main diagnostic measure and surely the most valuable is the x-ray, which shows a degree of density seen in no other acute chest condition, unless it is a chest full of fluid.

In making a diagnosis, infarction (pulmonary or coronary), acute dilatation of the heart, acute pneumothorax, pneumonia and fluid in the chest have to be considered, but cardiac displacement and the x-ray with a history of acute onset will clarify the diagnosis.

The prognosis is always good, practically all the cases recovering. The mortality is only 0.6 per cent. As a preventive measure, the avoidance of too tight application of adhesive in abdominal dressings is recommended. Boland and Sheret recommend, as a preventive measure, the removal of pillows and the raising of the foot of the bed twenty inches for twenty-four hours after operation to insure postural drainage of the bronchial tree, stating that none of the patients so treated developed pulmonary atelectasis.

As for treatment, turning or placing the patient in Fowler's position is the best. Drugs should be used only as symptoms seem to require. The condition improves in from twenty-four hours to a few days and the

lungs are completely reinflated in about ten days.

As I think over my past work and recall a few cases of what I considered ether pneumonia, I now think that in all probability I was dealing with postoperative pulmonary atelectasis and as a matter of interest will watch more carefully for the condition in the future.

SPINAL ANESTHESIA*

Use of Spinocain in 100 Cases

G. W. FULLER, M. D.
Atlanta

Spinal anesthesia had its beginning in 1884, when Corning performed the first lumbar puncture on a dog. In 1899 it was heralded throughout the world that Brier of Germany had demonstrated the surgical application of spinal anesthesia.

Rudolph Matas of New Orleans, was the first in this country to report its successful use. On December 10, 1899 Dr. Matas injected a 1 percent cocain solution in the spinal canal between the fourth and fifth lumbar vertebrae and obtained a successful analgesia for a hemorrhoid operation. This work was reported Dec. 30, 1899. Tait and Caglieri of Los Angeles appear to have used this method in an osteomyelitis operation Oct. 26, 1899, but, did not report it until April 1900. Therefore, Dr. Matas gets credit for being the first in this country to report its successful use. Since that time spinal anesthesia has been used more or less sporadically, interest in it dying down at times with casual users, but always being kept up by those who studied it enough to realize its many advantages and its possibilities for development. Interest in it has been stimulated from time to time with each introduction of a new preparation. In the course of time such drugs as cocain, betaeucain, stovain, alpine, tropocain, apothesine, tutocain and novocain have been used.

The advantages of spinal anesthesia are many and are generally appreciated. The relaxed and quiet abdomen is a joy to the operator. The disadvantages are few if it is properly used.

Spinal anesthesia is most useful in cases in which general anesthesia is contra-indicated, such as the aged or debilitated and those with cardiac, renal, hepatic, pulmonary or endocrin disease, or diabetes, hypertension, alcoholism, drug addiction, etc. It should not be used in cases of extreme myocardial degeneration or hypotension, or with any marked involvement of the central nervous system, as syphilis, tumors of brain or cord, or meningitis, or cases of marked hemorrhage or of positive blood culture.

In 1916 I had my first personal experience with spinal anesthesia in amputating a thigh for senile gangrene. Apothesine was used and I am sure that up until that time I had not seen a more beautiful and satisfactory anesthetic of any kind. Since that time I have been an admirer of this type of anesthesia, and have used it without hesitancy when I thought it indicated, employing Babcock's formula of stovain mostly.

In the last few months I have become interested in the novocain preparation formulated by George Pitkin, to which he has given the name Spinocain. While spinal anethesia is not new, spinocain is, and it is the writer's chief purpose in this paper to report its use in something over 100 cases in the last five and a half months.

Spinocain is put up in 2 cc. ampules and the formula is as follows:

	Gm.
Novocain	0.195
Strychnine Sulphate	0.0022
Starch paste	0.13
Alcohol	0.324
Normal Saline q.s.ad	2cc

This formula was arrived at after much experimenting by Dr. Pitkin and each ingredient was put in for a definite purpose. For the anesthetic ingredient, novocain was used because of its low toxicity, being only one-eighth as toxic as cocain It gives a complete anesthesia of the sensory nerves, satisfactory relaxation and only slightly affects tactile and muscular senses. It affects the vasomotor nerves less than any other drug used. Strychnine sulphate was added

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

to help maintain blood pressure; starch paste to make the solution viscid so that it will not mix with the spinal fluid until the novocain has been absorbed. The vehicle does not mix with the spinal fluid for 30 to 40 minutes after the injection, which gives a reliable and certain anesthetic for a definite time in proportion to the amount used. Alcohol was added to make it lighter than spinal fluid. These properties make it possible to float the anesthetic in the spinal canal much like the air bubble on a spirit level. Consequently, the operator is able to control the heighth of anesthesia on the body surface by different degrees of the Trendelenburg position—the smaller the degree the higher the level of anesthesia.

To further maintain blood pressure, Pitkin uses a 3 per cent ephedrin solution, and dissolves the novocain in this to give a 1 per cent solution of novocain. This is put in ampules containing 1.324 cc. of the solution, to be used as local anesthesia for the spinal puncture.

Technique of the Injection

Spinocain is much lighter than spinal fluid and should be given with the patient lying on his side to prevent too high ascension into the spinal canal. Dr. Pitkin advises against giving it in the sitting posture. For right sided operations, the patinet should be put on the left side so that the nerve roots on the right side will be better bathed by the floating solution. If the operation is to be on the left side, they should be put on the right side. For mid-line incisions, either side.

The spinal puncture is made painless by the injection of an ampule of the ephedrin-novocain solution, one-half in the skin and the other as the needle is pushed through and beyond the interspinous ligament. The solution is injected from a 2 cc. Luer lock syringe. Pitkin's 22 gauge needle with a 45-degree beveled point is used for the spinal puncture and the spinocain is injected from a 3 cc. Luer lock syringe. For accurately determining the degree of Trendelenburg, Pitkin has devised an instrument called the tiltometer. This instrument is attached to the table, and is almost indispensable in the use of spinocain.

When anesthesia of the perineal region is desired, only 1 cc. of spinocain is required. Attach the 3 cc. syringe, containing 1 cc. of spinocain, to the needle in situ. Aspirate one or two drops of spinal fluid, to make sure the needle is in the subarachnoid space, then inject and immedately place the patient in 15 to 20 degree Trendelenburg, as measured by the tiltometer. If the anesthesia is to be confined to the legs, 2 cc. of spinocain will be needed. Inject one-half of the contents, again aspirate 1 cc. and then inject entire amount. The table is now placed in a 10 to 15 degree Trendelenburg.

For anesthesia up to the umbilicus, 2 cc. of spinocain is required. With this quantity in the syringe, aspriate 1 cc. of spinal fluid, inject one-half the contents, draw another cc. of spinal fluid and repeat once or twice. After five minutes place the patient in 7 to 10 degrees Trendelenburg. To extend the anesthetic zone to the costal margin, use 2 cc. of spinocain and continue aspirations and reinjections up to a total of 6 cc. of spinal fluid. In five minutes put the patient in a 5-degree Trendelenburg. With this technique the anesthetic will reach to the sixth or seventh dorsal vertebra.

Thorough mixture in the syringe of spinocain and spinal fluid is important and can be facilitated by rotating the plunger of the syringe at the time of aspirating the fluid. It is advisable in operations in the upper abdomen, and in operations which may be anticipated to last more than one hour, that 3 cc. of spinocain be employed. Please observe that when operating in the perineal region and on the legs, the patient need not be kept flat for five minutes before being placed in Trendelenburg, but, when anesthesia up to the umbilicus or to the costal margin is necessary, the patient should remain flat on the back for five minutes in order that the novocain may become fixed at the proper point before the patient is placed in Trendelenburg.

The puncture should be made in the midline, under the strictest aseptic precautions, in any of the lumbar interspaces, depending on

the heighth anesthesia is desired. Great care should be exercised to prevent trauma. If these precautions are taken, the dangers from the puncture are practically nil. At least 2 cc. of spinal fluid should be allowed to escape before the spinocain is injected. The escape of too much spinal fluid predisposes to headache and tends to spread the anesthetic over too much area.

The perineal region is the first to be anesthetized, then the feet, legs, lower abdomen and finally the upper abdomen, to the costal margin. The anesthesia disappears in the reverse order.

In beginning my experience with this preparation, on account of not being familiar with its action, I erred too much to the safe side and consequently got quite a few failures especially for the higher operations. With its continued use, however, I have learned to eliminate practically all failures. At first I gave only 2 cc. and if sufficient heighth anesthesia was not obtained, gas or ether was then resorted to, very little being required. In case the operation is of great length and sensation begins to return before its completion, inhalation anesthesia can be used to finish. In a case of this kind I consider the patient far better off than if inhalation anesthesia was given throughout. Again with added experience, I find that in from ten to fifteen minutes after injecting, the heighth of anesthesia is fairly definitely fixed and if it is not sufficiently high, which occasionally happens, I do not hesitate to give the second injection of 1.5 cc. usually one interspace above the first. So far I have not had a failure after the second injection. In gynecological work, where both vaginal and abdominal work are to be done, one can easily see after the vaginal work is completed, if the anesthesia is of sufficient height for the laparotomy. If not, before the abdomen is prepared, it is simple enough to turn the patient on her side and give the second injection, which will almost without exception take care of the situation.

With reference to the preoperative preparation of the patient, I would say that scopolamin is rarely needed and is often very objectionable. We have had a few patients come to the operating room so unruly from its effects that they could not be kept sufficiently quiet for the puncture, and consequently general anesthesia was resorted to. Another objection to its use is that after the shocking part of the operation is over, they frequently drop into the deep scopolamin sleep, which may be misleading in judging the effects of the spinal anesthesia. I find that the usual one-fourth grain of morphine and 1-150 of atropin given about 15 or 20 minutes before the operation, is satisfactory.

With experience one will soon learn the best way to handle the patient to keep him in the best state of mind. It is important for the one who sits at the head of the table to be a good conversationalist and engage the patient in conversation if they care to talk. Conversation among the operating room force should be guarded so that it will be as pleasing to the patient's ears as possible. Our patients are allowed to smoke if they care to, and it is almost comical to see one nonchalantly smoking while a major operation is in progress. One patient who had a beautiful tenor voice, chose to sing for us while his appendix was being removed. During the operation patients may be allowed cracked ice or small amounts of water. This is as a rule very much appreciated. Occasionally a little nausea is experienced especially with high abdominal cases, but, this is of little consequence and passes off quickly.

After the operation, the patient should have the foot of bed elevated for four to six hours. It has been our practice to roll the patient down to bed on the operating table in the same degree of Trendelenburg that was maintained throughout the operation. It is not necessary for a nurse to sit with the patient after they have returned to bed, as it is with general anesthesia, and consequently their burdens are greatly lightened. The ward nurse will quickly tell you how much they prefer to have patients brought back who have had spinal anesthesia, rather than those who have had inhalation anesthesia.

Results

The results in this series of cases have been more than satisfactory. The dreaded drop in blood pressure that so many have

objected to in the past, seems to be almost eliminated with Pitkin's method. I have taken nineteen representative cases and averaged the behavior of the systolic and diastolic pressure, and the pulse. With these cases the systolic pressure shows an average major drop of 18, the diastolic 10 and the pulse shows an average major drop of 10. Only one little unpleasantness occurred which was due entirely to a gross error in the classical technic in the use of spinocain.

For years in using solutions that were lighter than spinal fluid, I have been in the habit of sitting them up; if any difficulty was experienced with the puncture in the lying position. I have made no exception to this rule with spinocain. A few days ago, however, after an unsuccessful attempt to enter the subarachnoid space of an abnormal spine, with the patient lying on her side, she was placed in a sitting position. Failure was then experienced in the second, third and fourth lumbar interspaces, but, the puncture was finally accomplished in the fifth lumbar interspace. The subarachnoid space was almost dry at this point, the spinal fluid coming only in slow drops. One cc. of spinal fluid was then aspirated into a syringe containing 3 cc. of spinocain and this mixing was repeated once or twice before the contents of the syringe was injected, then the patient was put on her back. After five minutes she complained of inability to breathe. Her pulse and blood pressure were excellent. She talked in a whisper and insisted that she could not breathe. Artificial respiration was then started, using Sylvester's method. It was no trouble to give her all the air she needed, keeping her perfectly pink for 18 minutes, at which time she was able to breathe normally. During the whole time her pulse was excellent and when the artificial respiration was stopped, her blood pressure was 140, however, 10 minims of adrenalin had been given. A vaginal and abdominal operation was then done, partly under the spinal anesthesia and finished under ether. I cite this case as being the only one in the series of 122 cases to be exact, that gave any trouble whatsoever, and to say that it was entirely due to error in technic. The patient should not have been sitting up in the first place, and secondly, a still greater mistake was made in taking time to mix the fluid back and forth with the patient in a sitting position. I now feel that I am in position to agree with Dr. Pitkin in his note of warning that spinocain should not be given with the patient in the sitting posture.

Conclusion

From experiences gathered in this series of cases and from the reported experiences of others, I have come to the following conclusions:

1. That spinocain is a safe and controllable preparation for spinal anesthesia.
2. That any desired level of anesthesia may be obtained by slightly varying the technique.
3. That it is the anesthetic of choice for the vast majority of operations done below the diaphragm. Believing that it will stand the test of safety if properly used, with any known inhalation anesthesia.
4. That the surgeon, who in this day and time is not prepared to give certain patients spinal anesthesia, is inefficient to the extent of denying those patients something to which they are justly entitled namely the safest anesthetic.

It would be amiss to conclude this paper without saying something about the value of spinocain in the treatment of paralytic ileus and intestinal obstruction cases. It gives a partial or complete blockage of the sympathetic fibers, according to the heighth and degree of the anesthesia. This allows the vagus nerve and the plexus of Auerbach and Meixner to become over-active, resulting in increased peristalsis, at the same time, the anal sphincter is relaxed by paralysis of the pelvic nerve. So with relaxed sphincter and increased peristalsis, evacuation of the bowels is almost certain, unless total obstruction exists. For the treatment of these conditions we have been using 1.5 cc. of spinocain in the fourth lumbar interspace, and so far the desired results have been 100 per cent in all cases in which it was used.

I consider this one of the great advancements, toward the relief of suffering humanity, in the last few years.

SPINAL ANESTHESIA IN OBSTETRICS*

LEWIS H. WRIGHT, M. D.
Augusta

My object in presenting this paper is not to report anything new but to focus the attention of this Society and the profession in Georgia on a form of anesthesia in obstetrics that in selected cases is very satisfactory and in some instances is a marked improvement on the general anesthetics in use. This procedure like any other must be well understood before one uses it. In careful hands in well studied cases it is relatively free from untoward effects but one must be familiar with the indications, contraindications and complications. For more detail than can be given here the interested are referred to the works of Cosgrove, Pitkin, Babcock, Labat, Evans and others. This paper will only discuss some of the more important points in relation to the use of this form of anesthesia in obstetrics.

Great care must be used in this for one is dealing directly with the central nervous system and as is well known it does not permit as much trauma and infection as do some of the other tissues in the body. The trite statement that is often used in reference to the indiscriminate use of venipuncture can be aptly applied here, i. e., "this is no playground for children." However, with the proper technic and materials and the use of good medical judgment in the selection of cases, many times this form of anesthesia is the one of choice.

Here let me quote from Newell's Presidential Address before the American Gynecological Society in 1926; "With the development of the obstetric specialists many fads have entered the practice. The delivery of all patients by a certain method undoubtedly renders the individual obstetrician very proficient in that particular operation and thus leads to the improvement in the technic of the operation. In his hands the results may become exceedingly good, but when less profiicient individuals try to follow his example, disaster is sure to follow. The routine induction of labor at a given date, when no indication is present except the saving of time for the patient and attendant has resulted disastrously for the mother and child in many cases. The operative craze which has led to the performance of Caesarean section for no good and sufficient reason has led to the loss of many lives. Obstetrics must be reduced to a sane basis with only one object in view, an increase in safety for the mother and child rather than the popularization of any particular procedure before the results can be called satisfactory." This holds as true for spinal anesthesia as for anything else. With this warning always in mind one cannot go far astray.

With spinal anesthesia the patient should be under the care of a trained anesthetist, the same as if an inhalation anesthestic was being used, whose duties are to watch the patient's mental as well as physical reactions. In the great majority of cases it seems like a waste of time to have this anesthetist but it adds to the safety of the patient to have some one always available to watch the pulse and blood pressure, to be on guard against respiratory failure and the like. For the anesthetist adrenalin, ephedrin, atropin, physiological saline, and ten or twenty per cent glucose solution should be on hand for immediate use. They should be available for any emergency at all times, ready to give. When complications occur they can nearly always be satisfactorily combatted if the things to use are at hand. This is absolutely essential. If it cannot be done one has no business using spinal anesthesia except in rare instances such as an emergency in the home.

The time of injection for spinal anesthesia varies whether for normal or operative cases, primiparas or multiparas. The effect of the injection lasts from forty-five to ninety minutes as an average and if given too soon the effect wears off and must be repeated or else supplemented by something else. There seems to be no special reason why a second injection cannot be given but it has not been used enough at the present time to be a standard procedure. More investigation along this line must be carried out.

*Read by title before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

Any normal pregnant woman is supposed to be as safe a risk for spinal anesthesia as for any other anesthesic. The place where it has its greatest value though is in the cases where a general anesthetic is contraindicated, such as pulmonary disease, heart disease, endocrin disease, including diabetes, and the toxemias of pregnancy, both nephritic and eclamptic including pre-eclamptia. These latter cases with hypertension and liver and kidney disturbance are much better subjects for this form of anesthesia than they are for a general anesthesia. Essentially all obstetrical operations are emergency operations, done after a prolonged period of labor with a patient more or less worn out and with considerable material in the stomach. This or any other anesthetic should not be used in a patient that is completely exhausted from a prolonged labor. Perhaps the greatest advantage that spinal anesthesia has in these cases is that it has no deleterious effect on the baby. This is of special note in prolonged labors and with premature toxic babies from toxic mothers. All inhalation anesthetics tend to anesthetise the baby somewhat and if he is partially asphyxiated from prolonged labor or is very weak because of prematurity this may be the deciding factor in his survival.

Fortunately the contraindications for the use of spinal anesthesia in obstetrics are few. Rarely is there a pregnant woman with some disease of the central nervous system other than syphilis. Syphilitic patients are not considered good risks for this form of anesthesia. Patients with a low blood pressure are also rare, that is, with blood pressure below one hundred systolic. These patients do not take any anesthetic well but are probably as good risks for spinal anesthesia as for any other. If well watched and supported with adrenalin, ephedrin or saline they will do very well. Any patient with a general septicemia is a poor risk also. If one has to do some obstetrical operation on this class of patient one should choose the anesthetic that seems to suit the case, be it spinal or general.

The advantages of this form of anesthesia in obstetrics are many. One is dealing with a patient that is conscious and they are able to cooperate to advantage in many cases. The anesthetic does not effect the uterine contractions and if the patient is properly coached she can be induced to bear down with the pain and often will deliver themselves where one has thought that forceps would be used. In some cases the freedom from pain seems to remove the reflex inhabition and they make good progress during the second stage of labor. There is considerable relaxation of the soft parts and there is less chance for perineal and cervical injury. This is especially noticable in operative cases. The fact that the anesthetic does not stop the uterine contractions lessens the danger of post partum hemorrhage. Because some of the sensations are retained there cannot be any rough measures used. This is especially valuable with some operators, and is a great protection for the baby. Other advantages to the baby have already been mentioned. There are many other advantages that are present in the individual case.

Whether one should suggest the use of this form of anesthesia in the home in place of chloroform or ether is a debatable question. It would depend somewhat on the emergency as well as other immediate conditions. It does seem in some cases the method of choice. As to this use the same rules would apply as elsewhere, i. e., the proper selection of the case.

The dangers of spinal anesthesia are not many but they are quite definite. Fortunately if there are going to be any complications they are almost always within the first fifteen minutes after the injection. Respiratory failure is the most dangerous complication. This rarely occurs with the present drugs and methods of injection. In obstetrics it is well nigh impossible for it to occur if proper precautions are taken. From a practical standpoint the fall in blood pressure due to vasomotor paralysis is the most common complication.

This sudden fall of blood pressure, even to zero, is followed by nausea, then vomiting, a cold clammy skin, slowing of the pulse and respiration with air hunger. There is a marked splanchnic conjestion. If the

heart-beat and the respiration do not cease there is no great danger provided the necessary supportive treatment is at hand. Adrenalin intravenously with saline will soon bring the patient back to normal. To prevent this terrifying condition adrenalin one-half to one cc. is injected deeply into the buttock at the time the anesthetic is injected. Instead of adrenalin, ephedrin may be used. Whether adrenalin or ephedrin is better is at the present time unsettled. There is some evidence to show that if ephedrin is used and then there is fall of blood pressure and one wishes to use adrenalin it is not effective or at least less effective. The advocates of adrenalin stress this point very much. During these maneuvers the patient should be in the Trendelenburg position. If necessary give artificial respiration, heat and the like.

With any lumber puncture there is danger of meningeal irritation and septic meningitis. These conditions are rare with proper technic. Nausea at times occurs but need cause little concern in itself. The ordinary remedies will usually relieve it. Although some of the other complications of spinal anesthesia are more to be dreaded perhaps the most annoying one is the persistent headache. Certainly it is the most frequent one. The so-called lumbar puncture headache occurs as often after a diagnostic puncture as after an anesthetic. It is due to the leaking of spinal fluid through the hole in the dura. It is usually an occipital or parietal headache and gradually increases in severity for several hours after the puncture. In the dorsal recumbent position the patient may be quite comfortable but on raising the head the headache may be most severe. Knowing the cause one can take precautions to prevent this complication in most cases and if it does occur, as sometimes happens, one can treat it quite efficiently. The precautions are, use a very small spinal puncture needle such as a 22 gauge with a bevel of 45 degrees, the Pitkin needle for example, be gentle in the introduction of the needle and have the patient quiet. As soon as the operation is over put the patient in position so that the head is slightly lower than the pelvis. If the headache develops with these precautions and there is no special contraindication one can place the patient on her abdomen with the head slightly lowered. This can be done with most obstetrical cases immediately after delivery if necessary. If the pain continues or gets more severe one may cary out any or all of the following procedure: insist on absolute quiet with no excitement, do not allow the head to be raised at all, pituitary solution in ampule doses, ephedrin 50 mg., morphine if necessary. Force fluids even resorting to extraoral administration. If these measures do not suffice, one can give 100 cc. of 0.5 per cent saline solution intravenously. In one case this was used with partial relief at once and complete recovery in a few hours. Headache may be due to meningeal irritation, etc., from faulty technic or drugs. This requires symptomatic treatment.

The technic of administration of spinal anesthesia in obstetrics is qute well standardized although different persons vary the method somewhat. It is best for one to become familiar with one routine and follow that rather than to try and follow several. One that is simple and satisfactory is as follows. The patient should be on the side, knees flexed and held close to the abdomen by the arms, thus flexing the shoulders and head. This widens the intervertebral spaces and makes the introduction of the needle easier. The patient must be made comfortable with pillows and the back must be parallel with the table. If there is lateral curving of the spine the introduction of the needle may be very difficult or even impossible. The area selected for injection, usually the fourth lumbar interspace in obstetrics, is well painted with iodine and alcohol and draped. If there is reason one may use the interspace above or below this one remembering that in some cases the dura terminates above the lumbosacral interspace. The fourth interspace is found on a line drawn between the crests of the ilium. The local skin area and interspinous tisues are infiltrated with about 2 cc. of a 1 or 2 per cent novocain solution. If the stick is made at the time a pain is on, the patient hardly notices it. Now the lumbar puncture is

made. The needle is inserted at right angles to the skin midway between the spines and carried deeply until the resistance of the interspinous ligament is felt. Here one procedes very carefully until the dura is punctured with a sudden give. The stylet is withdrawn and spinal fluid appears if the puncture has been successful. The spinal fluid must be clear. If it does not come clear almost at once the needle is withdrawn and may be inserted one space above. About 2 cc. of the spinal fluid is collected in the already prepared novocain tube containing from 50 to 100 mgs. of crystals depending on the amount desired, well mixed, drawn up in the syringe and slowly injected into the canal. This must be done carefully and gently. The needle is withdrawn and the patient is gently placed on her back with the head and shoulders elevated a little. The hole may be covered with a little wisp of cotton and some collodion. The anesthetic takes effect almost immediately and if the procedure has been successful there is complete relief from pain in less than five minutes. Whether one is using adrenalin or ephedrin to support blood pressure it should be injected just before the novocain is. Adrenalin, 10 minims is injected deeply into the muscles of the buttock, or 50 mg. of ephedrin may be used. Ephedrin may be combined with the novocain that is used for the preliminary skin injection.

Before the injection is made it should be explained to the patient that there will be peculiar feelings in the legs and that one may be unable to use them well for several hours. Also explain that this injection abolishes the sensation of pain but not of touch, etc. If one is careful to do nothing to scare the patient these procedures can be carried out quickly and easily in most instances. The fact that one is trying to do something for the suffering woman usually makes her very cooperative. Occasionally there will be a technical failure. This must always be borne in mind with this procedure.

Now the real test of spinal anesthesia in obstetrics presents itself. The patient is comfortable and free from pain and the uterus is still contracting. Has the injection been made too soon and will it thus wear off before delivery takes place, or has it been made too late and the full benefit not secured? Will the patient deliver herself or will it be an artificial delivery? All of this in most cases has been decided before the injection is made. Of course one will be mistaken at times and will have a normal delivery where it looked as if forceps would have to be resorted to. On the other hand some cases that look like they would deliver normally have to be delivered by forceps or version. Knowing that the anesthetic can be depended on at last in most instances for only sixty to seventy-five minutes will influence the time of injection and the procedure. This short time limit has one great disadvantage in that it creates a tendency to hurry. This is especially true with an artificial delivery.

Whether pituitary solution should ever be given in conjunction with spinal anesthesia before the third stage of labor is a debatable point. After reading a paper like the recent one by Mendenhall, one hesitates to advocate its use during the second stage of labor. However in competent hands in two, three, or four minim doses where one is present to watch carefully both patients its use is sometimes justified. In most of these cases though a low forceps delivery is indicated and not pituitary solution. This is especially true with primiparas.

The writer has had no personal experience with spinal anesthesia for Caesarean operations. It is highly recommended by many, while others prefer the infiltration anesthesia. Certainly both have their uses.

Much more could be said about the use of spinal anesthesia in obstetrics. It is realized that many important points have been omitted or only briefly touched upon. However it is hoped that what has been said will stimulate others to the use of spinal anesthesia in cases where it seems indicated, especially with toxic patients. Certainly many babies can be saved. With the proper technic and indications many of the untoward effects can be reduced to a minimum and one need fear few dangerous complications. It is not fool-proof any more than are the other procedures in medicine.

DISCUSSION ON PAPERS OF DR. FULLER AND DR. WRIGHT

Dr. Grady N. Coker, Canton: Wayne Babcock of Philadelphia reports 2,000 surgical cases, with no deaths directly ascribable to these methods, but Kornig says spinal anesthesia is dangerous in pregnancy and labor. It should never be given to the patient with low blood pressure. Just what effect it has on the contraction of the uterine muscles I am not prepared to say, but it certainly does not aid the patient in bearing down with her labor pains, because after spinal anesthesia most of her abdominal muscles are absolutely relaxed and I do not think any mechanical pressure will take the place of muscular contraction. Also, I think with a few improvements in technic and with the discovery possibly of new drugs spinal anesthesia will probably be about as safe as any form of anesthesia that we have at the present time. Another thing to consider in obstetrical cases is the fact that if you have a bad result and possibly death of the patient, you are dealing with two lives instead of one.

I had the pleasure about three years ago of attending Wayne Babcock's Clinic in Philadelphia and it is wonderful to watch him use spinal anesthesia. He is afraid of it and admits it. Also I heard him make the statement that he did not think it should ever be used without the aid of trained assistants.

Spinal anesthesia was first suggested by Corning in 1885. In 1898 Bier started with cocain as an anesthetic agent. His bad results were something terrific and he dropped the method as being too dangerous and due possibly to the presence of a toxic drug. It was only in 1904 when Fourneau discovered stovain for use in spinal anesthesia. Novocain was introduced the same year by Einhorn. Since that time our results with spinal anesthesia have gradually improved. Wayne Babcock has probably done more to perfect its use than any other American surgeon. Gaston Labat also has done some wonderful work along this line. I believe that the most fatilities with this method of anesthesia are due to the lack of experience.

Spinal anesthesia finds place where local anesthesia has been found impractical and general anesthesia contraindicated. I think it should be considered in extensive operations on the lower extremities and possibly in some selected obstetrical patients, but as to just what the selection should be I dare not at the present time make a positive statement.

Many surgeons use spinal anesthesia as a matter of convenience on patients who have no contraindication for local or general anesthesia. I do not believe this is warranted. It is an interesting thing to note that the enthusiastic sooner or later recedes from his position. This makes one wonder whether the truth has all been told. It is this reticence on the part of the enthusiastic advocates which heightens my caution more than any evil experience that I have had with spinal anesthesia. Many drugs have been used for this purpose but the most recent advocates seem to use the novocain group in various concentrations.

It might be interesting to note some of the bad effects in spinal anesthesia. The fall of blood pressure seems to be the chief drawback. The mortality rate is about one to every 3,000 patients. The disturbance in respiration and sense of impending death are alarming to both the patient and the surgeon. Persistent and severe headaches appear now and then which require anodynes for their control. They usually disappear after several hours but may last for several days. I do not think that we have so many of these bad reactions since using ephedrin and adrenalin chlorid. Dr. Pitkin advises giving the anesthesia lying down.

Dr. C. H. Richardson, Jr., Macon: I have always been interested in the subject of spinal anesthesia but have never felt that the method was entirely safe. As I have seen in the past several unfortunate accidents during its use, I have naturally been prejudiced against it. However, I wish to state that I have become a recent convert and I believe that the method is now being established on a rational and sane basis.

It had formerly been thought that when a substance such as novocain is injected into the sub-arachnoid space in the spinal canal, that it diffused up and down the canal and there was danger of it reaching the bulbar centers in the medulla, and causing respiratory paralysis. Labat has shown by reference to experimental work that this is not true and that the anesthesia has a special affinity for the substance of the cord and is rapidly absorved at the point of injection. This was proven by injecting a solution of novocain colored with methylene blue into cadavers, and into children who were dying with tubercular meningitis and then at necropsy showing that the substance had not diffused but a few centimeters each way from the point of injection.

It was also shown that when an injection of novocain was made in the lower lumbar spaces and then a spinal needle en-

tered at the level of the 8th dorsal space and left in during the course of the anesthesia and a few drops of spinal fluid withdrawn from time to time from the needle in the upper space, that at no time could novocain be found in the fluid. It is evident that if the solution diffused up the canal that the anesthesia would reach much higher levels than the point of injection.

Labat has shown that the fall in blood pressure which occurs in spinal anesthesia is due to paralysis of the vaso-constrictor fibers in the blood vesels of the splanchnic circulation, following paralysis of the splanchnic ganglia. And then this fall in blood pressure is of no importance if the patient is placed immedately in the Trendelenburg position with the head down, to combat anemia of the brain which occurs on the withdrawal of large quantities of blood from the periphery to the splanchnic circulation. Consequently we have found that the patient can be injected in a sitting position and then placed immedately on his back with the head of the table lowered, and the operation performed with practically no risk. However, we do give on the morning of the operation 3-4 of a grain of ephedrin by hypodermic, which helps to combat the rapid fall in blood pressure which occurs. If the systolic pressure goes below 80 we give about 5 minims of adrenalin chloride in saline intravenously. We are very much pleased with the results and intend to continue its use in selected cases along these lines.

Dr. Frank K. Boland, Atlanta: The use of spinal anesthesia, both on operating for acute intestinal obstruction and as a test as to the extent of obstruction, should be given consideration. Spinal anesthesia given by the method described by Dr. Fuller, may release the distended intestines and cause bowel movements in paralytic ileus and is especially recommended for trial in the postoperative type. I have employed the method in three cases and have found it most satisfactory. Two cases were postoperative paralytic ileus and one case was acute intestinal obstruction with enterostomy, in which it was difficult to get the bowels to move. The modus operandi of this treatment has not been made clear to me. I understand the relaxation is due to the action of the splanchnic nerve, which has an inhibitary effect on the muscle of the intestine. Experimental work along this line has been successfully done for many years on dogs, but it is only within the last few months that the method has been put to practical use in surgery.

Dr. Paul L. Holliday, Athens: The indications and contraindications as well as the advantages and disadvantages of spinal anesthesia have been very well covered already in the paper and previous discussions but there are a few points of importance which I think should be mentioned. There are two preparations of spinocain viz. the light and heavy. I was fortunate in being present in Philadelphia and hearing Pitkin read a paper on spinocain. He demonstrated its diffusibility by using a spine which had been bisected longtitudinally and injected colored solutions into a glass tube in the spinal canal. When the light preparation was used you could see it going toward the head if the head was elevated and the heavy solution would go downward. Other factors which have an important influence on the diffusibility of spinal anesthesia are the force with which it is injected and the number of times that the piston of the syringe is drawn back and forth in making the injection. Each time the piston is withdrawn and the solution is re-injected the anesthesia goes higher. For abdominal work the injection should be made at the junction of the twelfth thoracic and first lumbar vertebrae. If this is done it will not be necessary to use any local anesthetic for operations below the level of the umbilicus. For operations in the upper abdomen the piston of the syringe is withdrawn about one-half way two or three times.

I have never used a second injection and cannot say from experience what the effects would be but due to the fact that the blood pressure is already lower from the first injection I would be afraid to administer any more of the spinal anesthetic and would much prefer to finish the operation with gas in case something additional was needed for a longer anesthesia. I would not use ether, as complete relaxation of the abdominal muscle continues, even after some pain is felt so that nitrous oxide is very satisfactory.

It has been stated in the discussion that Babcock and Polak are opposed to spinal anesthesia but when I attended their clinics during the past winter I found that Babcock was using spinal anesthesia in practically one hundred per cent of his cases and in Polak's clinic I saw him operate upon several cases under spinal. He was very cautious, however, and used a blood pressure instrument strapped to the patient's arm and had an assistant to take frequent blood pressure readings.

It has also been stated in the discussions that by using spinal anesthesia in obstetrics that perineal lacerations would be increased

due to failure of relaxation of the muscles and that mechanical pressure would have to be substituted for normal contractions. As to the lacerations, Pitkin says that there will be fewer lacerations because of greater relaxation, and I think it only reasonable to expect relaxation since we know that spinal anesthesia produces complete paralysis downward from the point at which it is given. Mechanical pressure will not be needed if the injection is made in the fourth lumbar interspace because the nerves supplying the body of the uterus will not be effected but only those of the cervix. Even if all of the nerve supply of the uterus were to be cut off it would probably continue to contract as the uterine muscle can function independently of the nervous control. I do not think, however, that spinal anesthesia is practical for routine obstetrical work as it is of too short duration. It can, however, be used in operative work which will not take more than forty-five minutes to one hour and is a very valuable addition to anesthetics.

Dr. Wilborn A. Upchurch, Atlanta: I would like to express my appreciation for the splendid paper read by Dr. Fuller, and also to express my appreciation to Dr. Fuller personally for the assistance he has given me in some of my operative work. I, too, have been fully converted to the use of spinocain as a spinal anesthesia. During my service at Camp Wheeler, Macon, Ga., in the army, I had some rather sad experiences with the use of stovain as a spinal anesthetic; therefore, I have approached the use of spinocain with a certain amount of fear and trembling; I am frank to say that I was skeptical. However, Dr. Fuller has given twenty-two spinal anesthetics for me for different kinds of urological operations, including several nephrectomies, and with two exceptions they have been very highly satisfactory. One of these cases did not get sufficient amount of anesthesia to allow me to proceed with the operation for a nephrectomy, and we had to resorts to the use of ethylene. The other case, which was another nephrectomy or secondary to the previous nephrectomy, had so many adhesions and required such a length of time to deliver the kidney, that we had to use a local anesthetic in the muscles in doing our closure of the incision.

I am inclined to believe that spinal anesthesia is the anesthetic of choice in prostatectomy, because we can immediately begin forcing fluids on the patient after operation, and in that way prevent many anurias or even uremias; whereas, with a general anesthetic we have to limit our fluid intake for the first twenty-four hours at least.

Again, I wish to thank Dr. Fuller for his paper, and for his kind assistance to me in my work in operative urology.

Dr. George W. Fuller, Atlanta (closing): I appreciate the free discussion of this paper, and wish to thank those that have taken part in it.

I am not an anesthetist, but in my surgical work I have always had a keen desire to know something of the anesthetics that my patients were getting. It was this desire that prompted me to make a study of the use of spinocain.

Dr. Coker stated that many men used spinal anestheia for a while, and then abandoned it. This I was surprised to hear, as it is absolutely contradictory to anything I can find in the literature in reference to this point.

It is a deplorable fact that those who talk most against spinal anesthesia, are those that know the least about it. Just as surgery can only be learned around the operating table, so only can spinal anesthesia be learned. I believe that if the most doubtful one would use it fifty times, or even twenty-five times, he would never abandon it until something better than we have now is originated. I would like to ask all members of the profession, lest they be a stumbling block to progress, to be kind in their remarks on the subject, until they have made a thorough practical investigation of its use.

I do not wish to leave the impression that spinal anesthesia is without danger, or that it should be used without due seriousness and thorough study. I realize that if it is not properly used, trouble might result, just as is true with all other anesthetics.

I feel sure that any surgeon who makes a thorough study of this form of anesthesia, will consider himself better equipped to give good service to the surgical cases that come under his care, especially those in which its use is so strongly indicated.

OVARIAN RESPONSES

E. T. Engle, New York, (Journal A. M. A., July 27, 1929), found by a study of the literature that previous work has shown the daily transplantation of anterior lobe into immature female mice results in a marked follicular growth followed by ovulation. He found that treatment of immature female mice with the urine of pregnancy results in follicular growth, with atresia of follicle and ovum, and effective prevention of ovulation of the transformation of the follicle into a corpus luteum with retained ovum. He says it is difficult to consider the two types of response as being due to the same factor from the anterior lobe.

ALLERGIC REACTION IN CHILDREN WITH SPECIAL REFERENCE TO DIGESTIVE DISORDERS*

Lee Bivings, M. D.,
Atlanta

Allergic reactions in children, with the exception of asthma, have received but little attention. To those who have studied the subject intensively these assume a role of very practical importance, but the writer wishes, however, to sound a note of warning at this point, namely, that while the importance of the subject can hardly be overestimated, the incidence of true allergic reactions is comparatively low in comparison with other etiological factors in digestive disturbances.

Allergy is defined by Cooke (1) as the reaction occurring in individuals naturally hypersensitive, on the absorption of specific substances. Kolmer (2) defines it as a state of altered reactivity of the body cells. Cooke and Vander Veer (3), after exhaustive study, state that allergy with clinical manifestations, occurs in approximately 10 per cent of all human beings. Balyeat (4) concurs in this statement.

Heredity unquestionably plays a leading part in determining the individual who is to become hypersensitive. According to Cooke (5) it follows Mendel's law of dominant characteristics. Of children whose parents have a history of allergy on both sides of the family 75 per cent will develop symptoms of allergy in some form and usually during the first decade. Stuart and Farnham (6) have shown that states of hypersensitiveness are much more frequently encountered in late infancy and childhood than in later life and that the difference is admittedly due to the frequency of food idiosyncracies at that age. They believe that food hypersensitiveness is rarely acquired and that the incidence of occurrence reaches its peak during the second year falling rapidly during the first decade. This belief is strongly substantiated by the work of Ratner and Jackson (7) who have shown conclusively that hypersensitiveness, both of the active and passive type, may be transmitted from mother to offspring. Stuart and Farnham further state that sensitiveness to inhalants is apparently acquired and increases in frequency from the second or third year up to the end of the first decade. They present evidence to show that food hypersensitiveness gradually diminishes and is probably due to the occurrence of minute quantities in the diet corresponding to the method of desensitization. Therefore, an allergic individual apparently inherits from one or both parental strains an altered physiological make-up of the body cells, a tendency to become hypersensitive to specific substances and in the case of the inhalant group the specificity is dependent upon environment. As an illustration of this belief Peshkin (8) reports a series of a hundred children a large percentage of whom were sensitive to rabbit hair; Balyeat reports a similar series in which the largest percentage was sensitive to feathers. Peshkin's cases were of the Jewish race in New York, where it is a custom to stuff pillows and mattresses with rabbit hair, while Balyeat's cases used feather pillows and mattresses.

The writer assumes that the following symptoms may, at times, be indicative of an allergic state. Coryza, croup, bronchitis, hay fever, asthma, vomiting, diarrhoea, constipation, migraine, urticaria and eczema. The scope of this paper will be confined to a discussion of digestive disturbances, although such disturbances are frequently accompanied by skin symptoms such as urticaria and eczema.

Allergy has been defined, the relationship of heredity and environment has been shown, we will now take up the manner in which these symptoms occur.

To my mind the autonomic nervous system is the central mechanism in the expression of symptoms, through it we can correlate the occurrence of symptoms as a result of simple morbid reflexes on the one hand and as a result of reacting allergic cells on the other.

From any source may alter the balanced state of the autonomics bringing about a pre-

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

ponderance of activity of the parasympathetics with a resulting change in the calcium-potassium ratio of the body cells, a change in the H-OH ratio and a disturbance of the endocrine balance. These changes have all been demonstrated experimentally and upon a knowledge of their existence have been built some of the nonspecific treatments of asthma and other allergic symptoms. For instance, the administration of calcium, the use of adrenalin, ephedrin and atropin and the feeding of endocrine products. They do help the patient temporarily, but it is not strange that permanent relief does not come from such sources when there is an underlying immunological reaction with constantly recurring stimili producing more symptoms. Naturally relief must depend, then, upon the determination and removal of the specific irritants. Halfer (10), in a study of forty children, by testing the reactivity of the sympathetic-parasympathetic systems with drugs acting on each, has shown that there is a greater reactivity of the parasympathetics in children under three years of age which coincides with the clinical fact that allergic reactions are much more frequent in children under that age. There is no doubt that allergic individuals showing reactions are in a state of vagotonia with or without hypoactivity of the opposing sympathetic group. Clinical proof of this lies in our treatment of the acute attack, we give atropin, which paralyzes the vagus or parasympathetic group and adrenalin, which acts through the sympathetics, thus opposing the parasympathetics.

Before passing to a study of disturbances of the digestive tract, the writer wishes to cite several instances where apparent allergic symptoms have been shown to be the result of simple morbid reflexes. Asthma and its allied manifestations are not clinical entities but only symptoms. Weaver (11) cites instances where almost all the symptoms enumerated may be the result of an emotional upset. Davison (12) reports an instance of an individual who had sneezing attacks when the colon was distended with fecal matter and was relieved immediately by an enema and subsequent evacuation. The writer has encountered several instances where symptoms could suggest the existence of allergy, but which proved to be morbid reflexes. The most interesting was a case in which a child of seven years had had asthma frequently for three years. Careful history and physical and testing revealed only the information that she was infected with pin worms. These were eliminated and she has not had asthma for more than two years. When we recall the fact that the digestive tract and the lungs spring from the same embryonic tissue it is readily understood that their nerve supply is intimately connected and either affected reflexly by irritating of the other.

Although authorities differ as to the exact mechanism in the production of symptoms the most logical explanation seems to hold the individual body cell, with its altered reactivity, as the fundamental unit. The reaction occurring on contact with the specific substances circulating in the blood stream perhaps being diffused in increased quantities through the capillary walls. (O'Keefe-Manwaring) (13). It is to Walzer that we owe proof of the fact that unaltered protein molecules may be found circulating in the blood stream.

To review for a moment the nerve supply of the gastro-intestinal tract, we find that there are three sources of supply; the intrinsic nerves causing automatic movement, this movement regulated to some degree by the intrinsic nerves composed of the vague (parasympathetic) which acts as a motor nerve and causes contraction and the splanchnics (sympathetics) which act as inhibitors to the parasympathetics.

We have already brought out the fact that allergic individuals, while in an attack at least, are in a state of vagotonia. With the knowledge that the vagus is the nerve governing motility it is easy to understand why these individuals suffer from spastic constipation, diarrhoea and vomiting, abdominal cramps and loss of appetite during an acute attack whether the predominating symptoms are in the lungs or in the digestive tract. We do not know many of the details of allergy, for instance, why should one individual have asthma and another nothing

more than acute attacks of vomiting? However, we do know that during an acute asthmatic attack there is almost always a loss of appetite and abdominal pain, therefore the difference in symptoms may be entirely one of degree. Again we may bring out the fact that these symptoms may be entirely reflex in origin, as illustrated by the nausea and vomiting with an acute attack of appendicitis, but the central mechanism is here, too, the autonomic nervous system.

The following case histories will illustrate instances in which the etiological factor was a proven allergic state.

1. V. W., age 6 yrs., complained of frequent and violent vomiting attacks with diarrhoea and usually accompanied by urticaria and frequency of urination. Temperature of one to three degrees above normal. These attacks had occurred sporadically since infancy. Tested and found sensitive to eggs, tomatoes, lettuce and peas. These were eliminated from her diet and no attack has occurred for the past twelve months, her appetite has increased and constipation entirely cleared up.

2. H. M., age 4 yrs., had frequent vomiting attacks with severe utricaria since infancy. Yearly attacks of poison ivy dermatitis. Constipated. Found sensitive to wheat, prunes and pork. Elimination from the diet has prevented further attacks.

3. A. E., age 3 yrs. Loss of appetite, vomiting attacks, and urticaria of chronic type with acute exacerbations. Father is asthmatic and there is history of allergy on mother's side of the family. Found very sensitive to cocoa or chocolate and mildly so to cow's milk. Given boiled milk and eliminated chocolate from the diet. Has had no more vomiting attacks, and the urticaria has almost disappeared with the exception of two occasions when she pilfered a piece of chocolate candy followed in each instance by a severe attack of the urticaria.

There is no doubt in my mind but that many of the so-called acidosis attacks with vomiting and diarrhoea, and many of the so-called acid rashes in infants are due to an underlying allergic state.

Diagnosis—If we take into consideration the fact that allergy as a factor in digestive disturbances is very important, but comparatively less common than other factors we should first eliminate all other possibilities unless there is a definite personal or family history of allergy. The importance of a detailed personal and family history cannot be overestimated. In young children there frequently occur instances where there is no family history of allergy, but if the attacks are frequently recurring and no other cause can be found there is a strong probability of an underlying allergic state particularly if accompanied by urticaria or eczema. In such instances the determination of the specific irritants by accepted immunological methods offers the best hope of immediate and lasting relief.

Treatment—Is dependent entirely upon elimination of the offending substances or hyposensitization or both.

Summary—The allergic state is an acquired or inherited altered reactivity of the individual body cell. Reaction is elicited by contact usually through the medium of the circulation, expressing itself through the mechanism of the autonomic nervous system. The same symptoms may be elicited by other stimuli than the reacting allergic cell, but whatever the source of the stimuli there is brought about a disturbance of the endocrine system, altered chemical and biological makeup of the body cells. Many unsuccessful attempts at non-specific therapy have resulted because of the failure to take into consideration the complex changes resulting from imbalance of the autonomic nervous system the primary cause of which was constantly recurring stimuli from reacting hypersensitive cells.

Conclusions—Digestive disturbances in children are, more often than is commonly believed, the result of an underlying allergic state.

Permanent relief depends, in most instances, on the determination and removal of the offending substances although it is acknowledged that there is a tendency to gradually acquire a protection to food idiosyncrasies. However, such a recovery frequently is marred by the later development of other allergic symptoms such as asthma.

Children are particularly prone to show a multiple sensitivity, therefore testing should be thorough and complete. Moreover there is, in early childhood, a changing sensi-

tivity so testing must be repeated for prolonged results.

The writer feels that many of the vomiting attacks and diarrhoeas of early infancy and childhood are allergic in nature.

The writer wishes to acknowledge his indebtedness to Dr. Calvin Weaver for a comprehensive understanding of the autonomic nervous system and to Dr. Hal Davison for much help and many valuable suggestions in the preparation of this paper.

BIBLIOGRAPHY

1. Cooke, R. Tice's Medicine.
2. Kolmer, J. M.—Jn. of Lab. and Clin. Med. July '26, p. 905.
3. Cooke and Vander Veer.—Tice's Medicine.
4. Balyeat, R.—"Asthma." '28.
5. Cooke, R. (same as 3).
6. Stuart, H. C., and Farnham, M.—Am. Jn. Dis. of Ch., Sept., '26.
7. Jackson, H. C., and Ratner, B.—Jn. of Immun, v. 5, Nov., '27.
8. Peshkin—Am. Jn. Dis. of Ch., June, '26, p. 763.
9. Balyeat, R.—Jn. of Okla. St. Med. Assoc., July, '27.
10. Halfer, G.—Jn. of Lab. and Clin. Med, July, '28
11. Weaver, C. Jn. of Ga. Med. Assoc., Feb., '25.
12. Davison, H. M.—J. A. M. A., Sept., '20.
13. O'Keefe, E. S.—A. Jn. of Phys, Sept., '27.
14. Walzer, M.—Jn. of Immun., Apr. '26.
15. Howell's Physiology.

DISCUSSION ON PAPER OF DR. BIVINGS

Dr. Hal M. Davison, Atlanta: Dr. Bivings has just given us an excellent presentation, both of the theoretical and of the practical side of the allergic phenomena. The study of allergic reactions is comparatively new. Much that is practical has been definitely determined, but of the underlying causes of the allergic state very little is known.

The hypotheses that Dr. Bivings has laid down fit in well with the practical side. In reporting the case of croup definitely proven to be caused by sensitiveness to foods, Dr. Bivings has given us something of real value, and added another clinical entity to the list of allergic diseases. What other conditions may be added in the future, we do not know, but we may expect that new conditions will still be found. It has been definitely shown that the following diseases may be allergic in nature: asthma, hay fever, urticaria, angioneurotic edema, eczema, epilepsy, migraine, mucous colitis, spasm of the pylorus, and painful urination.

It has been in the last few years only that the profession as a whole has been interested in this phase of medicine, but allergy now demands interest from practically every specialty. It has been put on a practical basis, and any physician who so desires may use the skin tests and use the knowledge obtained therefrom.

We thank Dr. Bivings for the thoroughness of his preparation.

NEVI*

JACK W. JONES, M.D.
HERBERT S. ALDEN, M.D.

Atlanta

The dictionary states the definition of the term nevus to be: A mole, a pigmented spot on the skin either congenital or acquired. There has come to be in the medical literature quite a difference of opinion as to what the limitations of the term nevus should be. By some it is considered synonymous with birthmark, by others with those lesions in which the so-called nevus cell is present. A broad view would include any congential anomaly of the skin present at birth or appearing subsequently. Nevi occur in all different sizes and shapes, and involve most any portion of the body. Different authors have given us numerous classifications of nevi, however, in the discussion to follow, I will limit myself to the following types:

1. *Angioma* (a) nevus flameus, (b) nevus vasculosus, (c) angioma cavernosum, (d) nevus araneus.
2. *Nevus pigmentosus.*
3. *Nevus pilosus.*
4. *Nevus verrucosus.*
5. *Nevus papillomatosus.*
6. *Lymphangioma circumscriptum.*
7. *Seborrhoic nevus.*

When we consider the advisability of treatment or removal of any given nevus we are usually governed by the following considerations: Potential malignancy should be the outstanding consideration. For this reason pigmented nevi should receive more careful attention than non-pigmented nevi. In a person with a history of cancer in the family one should suspect all nevi as potential malignancies. Nevi subjected to irritation should be removed. A less important consideration is that of cosmetics. To the physician, this aspect does not usually carry much appeal, but to the patient it is oftentimes of primary importance. Many methods for the

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

removal of nevi have been proposed and used, viz: superficial caustics, injection of caustics, radium and X-ray, refrigeration with carbon dioxid snow and liquid air, actual cautery, surgery, electrolysis, electric desiccation, electrocoagulation, the radio-knife, etc.

The use of superficial caustics and injection of caustics is only mentioned to be condemned. Any treatment which irritates without thorough removal should not be used. The remainder of the methods mentioned have a place in the treatment of nevi, although electrodesiccation and electrocoagulation are by far the most useful methods.

1. *Angiomata*: (*a*) Nevus Flameus: This nevus offers a great problem as to treatment. With the destructive measure generally used, this nevus is usually to be preferred to the result. Ultraviolet light offers some hope in the handling of these patients. In some cases giving very good results and in others failure. (b) Nevus Vasculosus: Radium and X-ray are probably more widely used in treating this nevus than any other method, although carbon dioxid snow and electrodesiccation are more economical and in certain cases give as good or better result. In any nevus in which radiation has to be used to the point of producing sequelae to destroy the nevus, some other method of treatment should be used. (c) Angioma Cavernosum: Radiation is here usually the method of choice unless the lesion is too deep, then surgery or electrocoagulation are to be preferred. (d) Nevus Araneus: This nevus often called the spider nevus is very readily destroyed with electrolysis or electrodesiccation, and if correctly done should leave no cosmetic defect.

2. *Nevus Pigmentosus*: This is the nevus about which the physician is so often consulted. When this type of nevus degenerates it usually forms a melanotic sarcoma or carcinoma, and for this reason should receive our most careful consideration. When such a lesion has become malignant it usually makes little difference what type of treatment is instituted so far as the end result is concerned. There has been a great deal of discussion in the literature as to the proper procedure in dealing with the very black or blue-black nevi. Some authorities think they should not be molested unless degeneration occurs. It has seemed to me that it is better to remove them before this has occurred. If removal is attempted, it should be wide with the radio knife, surgery or electrodesiccation. The cosmetic result should not be considered when dealing with these lesions. The ordinary brown mole is best treated with electrolysis or electrodesiccation. If the lesion is small a better cosmetic result can usually be obtained with electrolysis, while if it is too large thorough removal is hard to accomplish in this way. We do not believe it safe to attempt removal of this lesion with radiation or refrigeration.

3. *Nevus Pilosus*: The hair in these lesions can usually be destroyed with electrolysis and the lesion later removed with electrodesiccation, although it is possible to destroy the hair with electrodesiccating current if the spark is very fine.

4. *Nevus Verrucosus*: These lesions may extend over quite a large area and if removal is feasible at all, will usually best be treated with electrodesiccation, later treating the scar with radiation if necessary.

5. *Nevus Papillomatosus*: This sac-like nevus is very simply removed by electrodesiccation with an excellent cosmetic result.

6. *Lymphangioma Circumscriptum*: This lymph vessel nevus is usually treated with radiation or surgery, but very prone to recur, it is probable that better results can be obtained here again with electrodesiccation.

7. *Seborrhoic Nevus*: This lesion is included in our discussion, although pathologically it probably does not belong here. I refer to the mole-like growths occurring on the skin of old individuals. They look similar to the ordinary brown moles, but are really pigmented hyperkeratoses. Some patients have a large number of these lesions which besides being disfiguring are potentially malignant. These lesions, even the large ones, can be removed with electrodesiccation, leaving scarcely a mark to signify where they were. Treatment for removal should not extend deeply, but should be very superficial. Although the Oudin current is used by some without novocaine, it is very painful and a very little novocaine correctly

injected gives an almost perfect anesthesia. To tell anyone the amount of current to be used on any individual lesion is very difficult, but a little experience teaches one the amount of spark and depth necessary for the different types of lesions. We usually find it is an excellent plan after superficial burning to take a sharp curet and scrape off the area burned. This, then, allows us to more easily determine the depth needed to destroy. This is an especially useful measure in the treatment of seborrhoic nevi or where the cosmetic result is important.

After Treatment: A lesion which has been destroyed with electrodesiccation or electrocoagulation is rendered strile by the treatment, and the only problem is to keep it in this condition and allow it to heal. We have adopted for the most part a method advocated by McFarland, viz: The use of a five per cent gentian violet dissolved in equal parts of alcohol and water, as a paint. If the lesion is dry on completion of treatment, this solution will form a coating and protection which does away with the necessity of a dressing. In over sixteen months' use of this solution, I have yet to see an infection, even with the lesion located in the axillae or groin. At the end of about seven days the crust will come off, it is again painted, which usually remains until the lesion is healed. Massage with any mild emollient after the lesion heals helps to reduce scarring. Boric acid ointment although messy and somewhat delays healing certainly seems to have some action in reducing scar tissue formation. In rare instances scar tissue or small keloids will result which usually regress nicely under radiation.

In conclusion I would stress that particular attention be given to all nevi from the standpoint, first of their potential malignancy and second, the cosmetic result, also condemn any method of removal which has a possibility of irritating these lesions without thoroughly removing them.

REFERENCE

*McFarland, A. R.—Archives D. & S. Vol. 17, No. 1.

Inter-State Postgraduate Medical Association of North America will meet at Detroit, October 21, 22, 23, 24, 25.

ENLARGEMENT OF THE CERVICAL LYMPH NODES*

D. C. ELKIN, M.D.
Atlanta

Introduction.
Classification.
I. Inflammatory.
  (a) Acute.
    (1) Septic absorption, as sore throat, impetigo.
    (2) In erythemata, as German measles, scarlet fever.
  (b) Chronic.
    (1) Tuberculosis.
    (2) Syphilis.
II. Neoplastic.
  (1) Leukemia, lymphatic and myelogenous.
  (2) Hodgkin's Disease.
  (3) Lymphosarcoma.
  (4) Endothelioma.
Prognosis and Therapy.

Introduction

Enlargement of the cervical lymph nodes is one of the most common conditions which the practitioner is called upon to treat. Such lesions frequently offer diagnostic problems of the greatest difficulty. Correct prognosis is even more perplexing and in many instances treatment is useless.

In the past four years 90 patients have sought treatment at the Steiner Clinic because of enlargement of the cervical lymph nodes. Of these, 50 were classified as primary lymphatic neoplasms. In the remainder, the enlargement was due either to infections or to malignant metastasis. In nearly half the cases, the provisional diagnosis disagreed with the final pathological diagnosis. Any condition presenting such difficulties at once invites interest and investigation. My aim in this paper is to present clinical data and basic facts gained from a study of these patients in order to determine certain criteria upon which diagnosis can be based.

Cervical node enlargements may be divided into two groups: (1) inflammatory, and.

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.
(From the Department of Surgery, Steiner Clinic, Atlanta, Ga.)

(2) neoplastic. Those due to infection are either acute, as in secondary involvement from sore throat, or chronic, as is frequently seen in tuberculosis and spyhilis. Neoplastic involvement is usually due to secondary metastasis or to primary lymphatic tumors; i. e., (1) Leukemia, (2) Hodgkin's disease, (3) lymphosarcoma, and (4) endothelioma.

Inflammatory. Enlargement from simple infection can be correctly diagnosed if due care is carried out in the examination. Small and apparently insignificant infections of the scalp, teeth or throat may give rise to diffuse involvement of the nodes of the neck. Occasionally the original focus has disappeared by the time the patient is first seen, but usually a history of the infection can be obtained.

The diagnosis of the erythemata with lymphatic enlargement is usually obvious from the nature of the skin eruption, but this may be overlooked because of inadequate examination and because attention is first directed to the swelling.

Syphilis can be established by the history, the Wasserman reaction and the response to treatment. However, much time may be lost by indiscriminate treatment for syphilis of all cases of nodal hyperplasia. Two patients in this series were so treated for over a year, whereas a blood count would have immediately established a diagnosis of leukemia.

In this series, the diagnosis of tuberculosis was the most difficult, largely because other conditions, notably Hodgkin's disease and lymphosarcoma, were incorrectly classed as tuberculosis. Children and young adults are most frequently affected, the disease is usually localized in the neck, there may be no lung involvement, and its cure is chronic, with few, if any, general symptoms save the presence of enlarged nodes. The difficulty lies in the fact that other lymphatic diseases often present the same characteristics, and unless there is lung involvement or chronic suppuration of the nodes, only a microscopic section will establish the diagnosis.

Neoplastic Involvement of Cervical Lymph Nodes

Certain clinical features characterize the primary neoplasms which aid in their proper classification, but only by microscopic examination can the diagnosis be established with certainty. Removal of tissue for examination has not appeared perceptibly to spread the process or affect the course of the disease.

Leukemia. Fifteen cases of leukemia have been studied of which 8 were of the myelogenous type, 4 chronic lymphatic, and 3 acute lymphatic. In each instance the diagnosis was made by examination of the blood which showed either a great increase in the number or in the percentage of abnormal cells. The cervical nodes were the first noticed in about half the cases.

It is usually insidious and gradual in onset. The first symptoms noted are a progressive loss of weight and strength together with a progressive anemia. The leucocyte count in the 8 cases of myelogenous leukemia ranged from 128,000 to 848,000, 12 to 61 per cent of which were myelocytes.

In the 7 cases of lymphatic leukemia, the first complaint was the presence of cervical nodes. In the acute type the symptoms are intense from the start, with fever, rapid prostration and hemorrhages. The increase of leucocytes circulating in the blood is variable but the large undifferentiated lymphocytes constitute from 60 to 99 per cent of the total white cells.

The chronic type of lymphatic leukemia is differentiated from the acute in that the symptoms are less severe, the course more prolonged and the lymphocytes in the blood are smaller.

Hodgkin's Disease. In 4 of the 8 cases of Hodgkin's disease recently studied, the cervical nodes were the first involved. No definite clinical course can be outlined for this condition, since its progress in different persons presents no uniformity. There may be prodromal symptoms of itching or eczema of the skin, but usually the first symptom is the enlargement of a chain of lymph nodes. The blood shows a moderate anemia, and the white count is usually normal except for a slight eosinophilia. A rise in temperature, which is frequently intermittent, is common. It may occur at any age, the youngest patient in our series being nine, the oldest seventy. Enlargement of the spleen is not nearly as frequent as in leukemia or lymphosarcoma.

Lymphosarcoma. This is a true malignant neoplasm which arises in lymphatic tissue. The acute cases are characterized by their rapid invasive character which gives rise to necrosis and ulceration and result in early death. More often the process is chronic, in which the only complaint is the presence of enlarged nodes, which may have been present for several years.

Of 15 patients with lymphosarcoma, 13 were males. In 11 the cervical nodes were first involved. It is essentially a disease of youth, the average age being 33. Eight patients were under thirty, and of these 4 were under fourteen.

As in Hodgkin's disease and leukemia, fever was frequently present. A leucocytosis ranging between 12,000 and 20,000 was constant enough to be of some diagnostic value.

Endothelioma. Primary endothelioma occurred in only three cases of this series. In each patient the cervical region was first involved. In two the disease was rapidly fatal, but in one it has remained localized in the neck for five years and has responded rapidly and favorably to treatment. Clinically there is little to differentiate it from other lymph node malignancies. The blood count is usually normal and there is no eosinophilia. Metastases to the lungs may be confused with secondary carcinoma. The localized form is usually found in robust young adults and its chronicity and favorable response to roentgen therapy simulate certains forms of lymphosarcoma so closely that microscopic section is necessary for diagnosis.

Prognosis and Therapy

Proper prognosis and therapy depend on accurate diagnosis and in many instances this can only be accomplished by microscopic section. In the acute infections care should be taken not to operate until suppuration has taken place as is evidenced by fluctuation.

In tuberculosis, operations are giving way to more conservative measures. In patients with one or two isolated nodes, operation may be advisable as a means of completely eradicating a focus, but where extensive and mutilating operations are necessary, fractional doses of irradiation together with heliotherapy is a preferable method of treatment.

In the primary neoplasms of lymph nodes, irradiation seems by far the best method of treatment. While not curative, it offers to the majority of patients definite palliation not only in retardation of the growths but by an improvement of their general health.

The prognosis in all forms of leukemia is generally bad, but in the chronic forms life may be prolonged for a number of years by roentgen therapy. The dosage used is dependent on the response in leucocyte and red cell count. Such a fall in white cells is the best indication of response to treatment, the most favorable response in general symptoms being noted when the count is reduced to about one-fourth of the maximum number of cells. In acute leukemia, response to irradiation is rapid, but usually unfavorable, due to the accompanying anemia. If such treatment is instituted it should be done carefully and in small dosage.

In Hodgkin's disease there is a diminution in size of the nodes and an improvement in the general condition of the patient following roentgen therapy. The improvement, however, is usually temporary in this disease, the average life after onset being only 19 months.

In lymphosarcoma, the duration of the disease is extremely variable. The patients, except in the terminal stages, do not appear sick, and life may be prolonged for many years. This is in marked contrast with the cases of leukemia and Hodgkin's disease in which the duration of life is much shorter and in which the patients appear sick from the onset of the illness.

Response to roentgentherapy in lymphosarcoma is usually rapid both in regression in the size of the nodes and in improvement of the health. So notable is this that the response is of diagnostic value, since in other malignancies of lymph nodes the improvement is slower and less marked.

DISCUSSION ON PAPER OF DR. ELKIN

Dr. W. W. Battey. Augusta: This excellent paper of Dr. Elkin's seems to have so completely covered the subject that there is very little left to say about it, except perhaps to add some emphasis to what has already

been said by him. If you recall the literature of years past you will remember that there was considerable discussion as to the nature of enlarged cervical lymph nodes. At that time cervical lymph node enlargement was synonymous with tuberculosis. However, we know this is not true. Thorough examination of cases clinically similar did not show any evidence of tubercular involvement, and the prevailing organism found was the streptococcus or staphylococcus, of mild virulence. The incidence of tuberculosis in chronic cervical adenitis is due unquestionably to a chronic and injurious irritation along the lymphatic channels in the regions near the part involved.

The causes of glandular enlargement are so numerous that before any type of treatment is carried out thorough examination should be made of every individual case. First of all, we should examine the scalp for the possible presence of seborrheic eczema, or pediculosis, and a careful examination should be made of the ears for the purpose of ruling out abscess of the canals or otitis media. Thorough examination should be made of the mouth for ulceration of the mucous membrane or of the fauces, and, last but not least, thorough examination of the tonsils and the pharynx for adenoid vegetations.

I am sure you have all noticed the rarity of cervical gland enlargement in children under your observation at this time. I believe this is due to the excellent school examinations we have at present. Cryptic tonsils are operated upon immediately, and all cases of skin eruptions are referred to a physician for treatment and the patient is sent home.

Treatment consists of conservative as well as radical measures. In the conservative group we have sunshine, cod liver oil, syrup of iodid of iron, and whenever frank abscess makes its appearance, incision, curettage and packing. Many of the cases will recover if handled under this regime.

Those who advocate the radical treatment of removal of the glands by block dissection claim that the period of convalescence is shortened by one-half.

In 1913 Dr. Ewing reported a series of cases of primary endothelioma of the cervical lymph nodes. At that time primary endothelioma was supposedly a medical curiosity.

Dr. Thos. Bolling Gay, Atlanta: In view of the point that has been made that most of these cases occur in children and young adults, and that the prognosis is so gloomy in the conditions Dr. Elkin has discussed, and the fact that he stressed the importance of diagnosing these cases early, it may be of interest to you to know of some studies I made of 3,507 children in regard to glandular enlargement from birth to thirteen years of age.

My attention was first called to the great number of children with cervical gland enlargement when I was examining 4,500 children for the University of Iowa, in 1921. I was so impressed with the way the glandular enlargement rises to a peak at about eight years and then decreases toward thirteen years that I made a special note of the enlargement in the 3,507 children I examined in the next three years.

I found that at birth a small percentage of children have some glandular enlargement, usually in the postoccipital region. There is a rapid jump upward in the curve of the incidence of cervical gland enlargement at two years when ten out of every one hundred children have some cervical gland enlargement. As the age increases a peak is reached at eight years, when fifty out of every hundred white children have some cervical gland enlargement, and sixty out of every hundred colored children.

The interesting thing to me is that though at the same period the cervical gland enlargement increases, the tonsils and adenoids show signs of enlargement and the decay of the deciduous teeth increases its pace, the cervical gland enlargement is always about 20 per cent higher than the combination of infected tonsils and adenoids, and decayed deciduous teeth. It has been interesting to me since I made this study to account for the cases which probably are not due to the tonsils and adenoids or to the decay of deciduous teeth. It is true that by the time the child has reached six years of age he has had most of the contagious diseases. The age of greatest incidence of scarlet fever is six years and that of the other contagious diseases under that. It is possible that some of these cases of cervical gland enlargement are left over from the exanthemata, to which Dr. Elkin referred. In addition to this, it is posssible that it is due to some other factor.

Dr. D. C. Elkin, Atlanta, (closing): I am very appreciative of the discussion of Dr. Battey and Dr. Gay.

The point I wish to make is that of the ninety cases studied 50 per cent were neoplastic and had been present for a number of years. The other 50 per cent were due either to acute infection or tuberculosis. In the past we have been too ready to treat cervical enlargements as tuberculosis or syphilis, whereas if the blood is examined or a biopsy done a number of them will be found to be neoplastic.

THE MANAGEMENT OF CONVERGENT STRABISMUS*

WILLIAM O. MARTIN, JR., M.D.
Atlanta

Unfortunately there still exists some differences of opinion as to the management of cases of convergent strabismus, not only among the laity but among the profession, and even among the ophthalmologists themselves. It is because of this that we feel this discussion may be in order.

Heretofore it has been the practice of most men to wait until a child reached some arbitrarily fixed age before an operation was considered and even then some men hesitated because many of their cases developed a secondary divergence later on in life. The general trend has been to refract and prescribe glasses with frequent observations and changes in the glasses. This in some instances suffices, but not in the majority of cases. The secondary divergence referred to may come on some years later and is not due to the age of the individual as some may think, but due to the type of operation, namely, a tenotomy of the internal rectus muscle. In this operation the muscle is severed and left free to reattach where it may and this is often behind the equator of the globe or plane of rotation of the eyeball, so that the power of adduction is lost as is convergence. The unopposed action, then, of its antagonistic muscle, the external rectus, is often sufficient to cause the eye to deviate outward, thereby producing a divergent strabismus with a defect as great or greater than the original. This in a way explains the reluctance with which some men advise an operation to straighten the eyes, and the unfortunate patient is left to go through life with such an unsightly handicap, and as we all know it not only deters men in a business way but detracts from a woman's appearance to such an extent that she is embarrassed to the point of humiliation in her social contacts.

About three years ago Dr. Jameson, of Brooklyn, devised an operation called Recession. In this operation the muscle is tenotomized and then sutured to the episclera and sclera some 3-6mm. back of its original insertion, according to the amount of deviation to be corrected. This anchors the muscle and forms a new insertion, thereby serving the purpose of lengthening the muscle. This may be combined with Reese's Resection (shortening) of the externus if more effect is desired. In this way it is possible to determine at the time of operation just how much to do and just what effect you will obtain, especially if done under local anesthesia.

We prefer to do these operations under local anesthesia and have done them in one case three years and four months of age and many as young as five and six under local. One must bear in mind that the principal pain is produced by traction on the muscle. In additional to the instillation of 4 per cent cocaine solution we inject 2 to 3 minims of a 2 per cent cocaine solution into the belly of the muscle far back behind the globe. It must be far back to give the desired effect and also to prevent any interference with the operative field by the infiltrated subconjunctival tissues and Tenon's capsule as occurs if not given back into the muscle itself. In older children and in adults it is not necessary to do this, but it is of great value in young children. We have used this injection in several hundred cases without a single untoward effect and believe it to be perfectly safe in the amount and strength advocated.

Since the family physician and the pediatrician are often the first to be consulted, it is well for them to know what can be and what should be done in cases of squint. We will confine our remarks to cases occurring in children because adults almost without exception fall into the operative group.

Convergent strabismus may be divided into paralytic and non-paralytic types. The latter may be further divided into periodic, concomitant and alternating. The method of handling, of course, depends upon the type as well as the age of the individual.

In the paralytic cases we must try to determine the cause if possible and treat that. Among the most frequent causes we have syphilis, (6th nerve palsy) birth trauma, rheumatic which is usually of short duration,

*Read before the Fulton County Medical Society, Atlanta, Ga., May 2, 1929.

Gradenigo's syndrome as well as other intracranial disturbances. Along with these we may class Duane's syndrome in which there is a congential fibrosis of the external rectus and not a paralysis. Operative interference must be deferred until we are sure there is no possibility of the paralysis clearing up.

In the period type the mother usually gives a history of having noticed that one eye or both turns in at times, especially when the child is tired, sick or his attention is relaxed. At the time of examination the eyes may be perfectly straight and one is apt to conclude that the mother only imagines the condition and is overanxious. At this time a careful refraction should be done under atropin mydriasis and proper glasses prescribed for constant wear if an error of refraction be found. Frequently this is all that is necessary and a permanent squint does not develop.

The concomitant often begins as a periodic squint which has been allowed to go uncorrected. There is usually a convergence excess as a basis. The squint may become manifest after a severe illness, such as measles, etc., where the child's resistance is lowered and he is no longer able to overcome the tendency to convergence in his debilitated state. Associated with the convergence excess there is often a high degree of hypermetropia (far-sight) or hyperopic astigmatism, but not always because sometimes we see it in myopia (near-sight). If seen before the school age, at which time the child begins to use his eyes more, full correction of the refractive error often corrects the squint provided there be much hypermetropia, but the glasses must be worn constantly. By correcting the hypermetropia we lessen the accommodation and the accompanying convergence which is so closely associated, and it is in this way that glasses aid. It is self-evident, then, that if hypermetropia is not present glasses are of no aid in straightening the eyes.

If after a few months there is not considerable improvement with glasses we usually advise an operation. We believe in straightening the eyes early for the following reasons: for the cosmetic result, thereby saving the child embarrassment even to the point of developing an inferiority complex; to develop fusion, i. e., binocular single vision, if possible; to prevent the amblyopia exanopsia (poor vision from disuse). The amblyopia seems to be, in some cases at least, due to suppression of images to prevent diplopia. We have seen some cases in which the good eye was lost as result of injury and after some years, even, the vision in the bad eye (crossed eye) improved almost to normal.

Such methods as covering the fixing eye or putting atropin in it are still used by some men, but it is doubtful if they are often satisfactory.

We have operated on children as young as two and a half years of age with excellent results, and prefer doing it, if possible, before the school age for the reasons just stated.

Cases of true alternating strabismus are not often relieved by glasses, and in these cases we prefer a bilateral recession of the internal recti early because the vision is good and it is desirable to develop binocular single vision. The stereoscope is of value in the post-operative treatment for this.

In all cases of squint a careful refraction should be done and glasses tried if indicated, but when they fail we must consider other measures and not be content to allow the condition to remain when it can be so easily corrected. Some cases have little or no refractive error, so in these cases it is obvious that glasses will do no good. If we can prevent one from going through life with such a handicap and in addition save the vision of the squinting eye, we have been of some service to mankind.

YEAST AND PELLAGRA

N. P. WALKER, M.D.†
Milledgeville

On June 11th, 1929, two sisters, J. B. and L. B., were admitted to the Georgia State Sanitarium, both insane because of pellagra. On June 19th, 1929, Miss L. A. was admitted, insane because of pellagra. On June 28th, 1929, her sister, Miss I. A., was admitted for the same reason.

†Clinical Director, Georgia State Sanitarium, Milledgeville, Georgia

During the year 1928 forty-five patients were admitted to the Georgia State Sanitarium whose mental trouble resulted from pellagra. During the same time nineteen patients died of this disease.

In the first six months of 1929 thirty-one patients were admitted whose psychosis was due to pellagra. There were fourteen deaths. This is an exceedingly high death rate and is due to the fact that the patients are usually delirious when received and some of them die within a few days after admission.

The admission of pellagrous cases is always heaviest in the latter half of the year, and it is expected that admission for 1929 will exceed those of 1928 by a considerable margin. Pellagra is playing a considerable part in the sanitarium admissions and a more considerable part in the death rate.

While the dietary treatment is fairly generally understood and practiced, it appears that there is not always a clear conception of the use of yeast in the treatment of pellagra. In the early stages yeast is quite a valuable remedy and even in advanced cases it sometimes gives good results.

The form of yeast given is quite important. The U. S. Public Health Service recommends the pure substance in dried and powdered form. The dosage varies from one teaspoonful to one tablespoonful given three times daily. This may be given in milk, water, semi-solid or liquid foods generally. It is not freely soluble. Bakers' yeast as purchased in small cakes does not answer for the reason that due to high moisture and filler content, it is impracticable to give enough to equal the daily dosage of the pure dry substance. The dry yeast is usually not viable and undesirable fermentative results are avoided by its use. It keeps well when dry. The price of yeast is important since many people find it hard to pay for. The price varies several hundred per cent. It is advisable for the physician to write several manufacturers for this reason. The following are some of the manufacturers:

Fleischman & Co., Cincinnati, Ohio.
Northwestern Yeast Co., Chicago, Ill.
Vitamin Food Co., Westfield, Mass.

The use of yeast should not be expected to supplant the use of diet in treatment, but should be looked upon as a valuable adjunct.

A PLEA FOR FURTHER CO-OPERATION AND SUPPORT*

JANE VAN DE VREDE, R. N.
Atlanta

It is just a year ago that I came before your venerable Association for the first time. Your generous and understanding attitude toward the questions presented made me glad to accept the invitation of your Secretary-Treasurer, Dr. Bunce, to appear at this time.

He did not say so, but I think perhaps he expects me to give you some report of the activities of the nursing group—a sort of report of our stewardship, if you will.

May I venture to do so, and indicate where in my opinion the group seemingly responsible for failure to achieve results is so dependent upon other groups that no results are possible until the medical group, the hospital group and the nursing group can come to some common denominator of thought about some of the vital issues involved in this question of "the nursing situation," as the medical associations have so often termed the problem of securing adequate, efficient nursing service under satisfactory economic conditions?

The American Medical Association through its Council on Medical Education sets the professional standards of education which govern in general the conduct of institutions and physicians who practice.

When Florence Nightingale's achievements and contribution to sanitation and therapeutics stirred the world and resulted in the endowment of a real school of nursing, in 1860, it is natural perhaps that we should find the A. M. A. making a pronouncement about it. In 1869 it adopted a report strongly urging the establishment of similar training schools for nursing in every large and well organized hospital, and boldly averred that "nursing in its more exact sense is as much of *an art and a science* as medicine." All honor

*Read before the House of Delegates of the Medical Association of Georgia, Macon, Ga., May 7, 1929.

to that high utterance! Could the members of the medical profession have kept ever before them that picture of the "large and well organized hospital" school of nursing and the lofty idea that nursing paralleled the *science* of medicine as well as *the art,* it would not be necessary to quote from a later report made shortly after the three-year study of the Rockefeller Foundation on conditions in nursing and nurse education in the United States. The committee on the question of nurse education stated: "That the education of nurse training include (a) entrance requirements consisting of a four-year high school education; (b) that the length of the course be two years and four months, or twenty-eight months; (c) that the waste of the student's time in non-educational ward routine be greatly reduced; (d) that better teachers from both the medical and nursing professions be secured in the schools; (e) that the character and sequence of subjects taught, the percentage of time allotted to each subject and the correlation of practical and theoretical instruction considered with special care, and (f) that the standard be such that it may be carried out by relatively small as well as large hospitals. That there be a clasification of nurse training schools in which only those which conform to the standard outlined be considered as acceptable."

This committee went on record that it "appreciated the fact that these changes in nurse training schools might cause increased expenses in the hospitals maintaining schools; nevertheless it was believed that the improvements would more than offset this expense in preventing serious results and greater expense which might accrue to the hospitals from the present chaotic condition in nurse education.

This is a splendid report, but it has a "catch" in it—That the standard be such that it can be carried out in "relatively small as well as large hospitals." What did they mean by "relatively small hospitals?" The general assumption is one of less than 50 beds, or an average of 30 patients daily. By that standard, 25 per cent of our schools of nursing would be eliminated. If we adopted the four-year high school requirements for entrance to our schools of nursing, all but ten would be eliminated.

The suggestions of the College of Surgeons agree in the main with the report of this committee of the A. N. A., except name a three-year high school requirement for entrance, which would give Georgia 17 nursing schools, and a three-year course which is now in effect in all of them.

The American Hospital Association takes no stand of its own as to standards of nursing schools, but accepts for its pronouncement until the work of the National Committee on the Grading of Nursing Schools is completed the pronouncements of the State Examining Board for Nurses. The Grading Committee in their work on schools thus far has held to two principles:

1. No hospital should be expected to bear the cost of educating nurses out of the funds collected for the care of the sick. The education of the nurse is a public responsibility.

2. The fact that the hospital is faced with serious financial difficulty should have no bearing upon whether or not it should be connected with a school of nursing. The decision should be made upon the kinds and amounts of educational experience which the hospital is prepared to offer.

Using this yardstick, I leave it to you as to what schools of nursing should exist in Georgia!

Is it James Harvey Robinson who says "Few of us really think at all, and many of us when we think we are thinking are merely rearranging our prejudices?" On no question does this seem more true than the economic situation affecting nurses and nursing. The time has come when we need to grapple with this problem. If we do, we will find its solution, and it takes no prophet to predict it will not be found in the path of tradition.

Why should this situation have such a bearing upon our schools? Because we are faced with meeting the facts that are rapidly becoming current in the 5525 and more copies of 'Nurses, Patients and Pocketbooks.' This knowledge will have a far reaching effect on schools of nursing, as it will keep the

(Continued on Page 391)

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

AUGUST, 1929

EDEMA

Edema is a subject that we do not thoroughly understand—and the "we" this time is not editorial. Its causes are many; it is not our purpose here to discuss the simpler types, such as are associated with varicose veins, nor the very unusual ones, such as Milroy's disease, though an exquisite example of this has been recently studied at the Steiner Clinic. Edema is most frequently due to cardiac failure or renal disease.

Most of us were satisfied with the traditional explanation of edema in cardiac failure, namely, that it was the result of increased transudation from dilatation of capillaries and veins, which in turn resulted from faulty functioning of the circulation. In the last few years, however, an enormous amount of work at Vanderbilt University, the Mayo Clinic, the University of Wisconsin and elsewhere, has proved that this is not the whole story. Whatever the explanation, the usual and correct treatment is digitalis in adequate dosage with rest (except that Lugol's solution is the drug of choice preparatory to operation when cardiac failure is secondary to exophthalmic goiter). Massive edema imposes additional strain upon an already overtaxed heart, and its control is important in prognosis. Eyster has stressed the gravity of increased venous pressure, and sometimes blood-letting is advisable. But in all too many instances edema will not respond to these measures.

Edema in nephritis often yields to rest in bed with limitation of fluids, salt and protein. Some thirty-five years ago Friedrich Mueller described a condition characterized by edema, albuminuria and cylindruria, without changes in eye-grounds, increase in blood pressure or blood urea, to which in 1905 he attached the name nephrosis.

Two and a half centuries ago Thomas Willis, of "Circle of Willis" fame, knew that ammonium nitrate was valuable in the treatment of edema, but this knowledge was lost to the world until Jacobs rediscovered it in 1926. A few years ago European investigators, in attempting to devise the perfect antisyphilitic drug, synthesized "novasurol," an organic mercurial compound, and found that it was an excellent diuretic. This has been accepted by the A. M. A.'s Council on Pharmacy and Chemistry as "merbaphen." Merbaphen is being largely superseded by a recent similar but clinically less toxic product, "salyrgan," or "mersalyl," has been recently accepted by the Council.

Many cases in which the renal function is fairly adequate have been freed from edema by the combination of ammonium nitrate and merbaphen or salyrgan. In some of cardiac origin this has been accomplished without digitalis, but it would seem more scientific to push time-honored digitalis before resorting to the new combination. In a number of patients treated in the dispensary at Grady when edema persisted in spite of digitalis, rest, restriction of salt, protein and water, an occasional dose of mersalyl or merbaphen has done away with it. Even temporary relief makes the patient feel better. In some cases of nephrosis as much as eighty pounds of edematous fluid has been removed by ammonium nitrate and one of the mercurial diuretics. Ascites, due to portal or syphilitic cirrhosis or other cause, is also frequently relieved in this way, thus demonstrating that extrarenal factors are involved.

It is advisable to make the initial dose of mersalyl 0.5 c.c., as a few persons show an idiosyncrasy. The correct dosage is 5 to 10 grams (grams, not grains), of ammonium nitrate in enteric-coated capsules daily with 2 c.c. of mersalyl intravenously every four or five days until the edema is gone. More than eleven quarts in twenty-four hours has been voided after the first full dose of mersalyl. Sometimes edema once removed can be controlled indefinitely by the continuation of ammonium nitrate alone, and in some instances even this can be stopped. The restriction in the amount of salt and of fluid

allowed the patient must be maintained indefinitely, though sometimes even this restriction may be gradually relaxed.

L. M. B.

MEDICAL HISTORY OF GEORGIA

Upon a call of the Chairman, the sub-committee, appointed by the general committee to compile a Medical History for the Medical Association of Georgia, met in the office of the Chairman on July 31, 1929. Those present were Doctors Bunce, Boland and Thrash.

Dr. Boland recommended the establishment of a Department of Archives of the Medical History of Georgia, making this department a part of Miss Blair's Department of Georgia History which is to be established in the old Rhodes home on Peachtree Street for the present, and also the establishment of position of Historian for the Medical Association of Georgia. After the committee considered this recommendation the following resolution was adopted:

> "That a Department of Archives of Medical History of Georgia be established and that these archives be kept as a part of Georgia History, which is at present under the supervision of Miss Blair;
>
> "That we select as Historian for the committee, Dr. J. C. Weaver;
>
> "That we recommend to the House of Delegates of the Medical Association of Georgia that the office of Historian be created by the Medical Association of Georgia;
>
> "That we recommend that Dr. Weaver be elected to this position;
>
> "That revision of the by-laws and constitution be made for the establishment of this office."

The committee appointed Dr. Frank Boland to take the matter up with Miss Blair to see whether or not she would co-operate with us in carrying out the above plans, and to notify Dr. Weaver that he had been elected to act as Historian for this committee.

We recommend that these minutes be published in the Journal of the Medical Association of Georgia.

E. C. THRASH, M.D.,
Chairman.

THE FAIRHAVEN TUBERCULOSIS SANATORIUM

The physicians of Georgia should know of this excellent sanatorium, situated in the foothills of the Blue Ridge Mountains, three miles from Athens, Georgia. It is under the supervision of the Clarke County Tuberculosis Association and has for its medical director Dr. C. O. Middlebrooks. An advisory staff is composed of the superintendents of the Battle Hill Sanatarium, Atlanta, and the State Sanatorium, Alto, as well as the executive secretary of the Georgia Tuberculosis Association. It is a thirty-bed hospital and the total expenses of each patient are $20 per week.

It is a poor policy and an economic waste to the patient and the commonwealth to send patients with tuberculosis out of the state of Georgia for treatment when such good climatic conditions exist here within reach of all. This sanatorium is modern in every respect and is equipped to care for a patient as well or better than any institution of its kind in the United States.

All of the writers' patients who have had the good fortune to enter Fairhaven Sanatorium have been well pleased with the fine treatment given there. The physician who refers a patient to Fairhaven is not forgotten. He receives a bulletin twice a month telling him of the progress of his patient. These bulletins are convenient for filing with the patient's chart and thus keep a permanent record of your patient's stay in the hospital.

Dr. Edson W. Glidden, Superintendent and Medical Director of the State Tuberculosis Sanatorium, has visited Fairhaven and heartily endorsed it as an ideal place to care for tuberculosis patients.

E. A. B.

Southern Medical Association will meet at Miami, Florida, November 19, 20, 21, 22.

American College of Surgeons will meet at 40 East Erie Street, Chicago, October 14, 15, 16, 17, 18.

District and County Societies

DISTRICT OFFICERS

FIRST DISTRICT

President ..... Elarbee, Geo. W., Daisy
First Vice-Pres. ..... Quattlebaum, J. K., Savannah
Second Vice-Pres. ..... Lang, G. H., Savannah
Sec'y-Treas. ..... Long, Wm. V., Savannah

SECOND DISTRICT

President ..... Chason, Thomas, Donalsonville
Vice-Pres. ..... Sanchez, S. E., Barwick
Sec'y-Treas. ..... Watt, Chas. H., Thomasville

THIRD DISTRICT

President ..... Lunsford, G. G., Cordele
Vice-Pres. ..... Ware, R. M., Fitzgerald
Sec'y-Treas. ..... Greer, Chas. A., Oglethorpe

FOURTH DISTRICT

President ..... Clark, W. H., LaGrange
Sec'y-Treas. ..... Callaway, Enoch, LaGrange

FIFTH DISTRICT

President ..... Fort, A. G., Atlanta
Vice-Pres. ..... Camp, R. T., Fairburn
Sec'y-Treas. ..... Evans, J. R., Decatur

SIXTH DISTRICT

President ..... Miller, G. T., Macon
Vice-Pres. ..... Hunt, K. S., Griffin
Sec'y-Treas. ..... Thompson, O. R., Macon

SEVENTH DISTRICT

President ..... Wood, Chas. V., Cedartown
Vice-Pres. ..... Alsobrook, J. S., Rossville
Sec'y-Treas ..... Perkinson, W. H., Marietta

EIGHTH DISTRICT

President ..... Carter, D. M., Madison
Vice-Pres. ..... Gholston, W. D., Danielsville
Sec'y-Treas. ..... Gerdine, Linton, Athens

NINTH DISTRICT

President ..... Ross, S. T., Winder
Vice-Pres. ..... Welchel, C. D., Gainesville
Sec'y-Treas ..... Bennett, J. C., Jefferson

TENTH DISTRICT

President ..... Cranston, W. J., Augusta
Vice-Pres. ..... McGahee, R. C., Warrenton
Sec'y-Treas. ..... Phinizy, Irvine, Augusta

ELEVENTH DISTRICT

President ..... Huey, H. G., Homerville
Vice-Pres. ..... Fleming, Albert, Folkston
Sec'y-Treas. ..... Reavis, W. F., Waycross

TWELFTH DISTRICT

President ..... Edmondson, J. W., Dublin
First Vice-Pres. ..... Coleman, W. A., Eastman
Second Vice-Pres. ..... Moye, C. G., Brewton
Sec'y-Treas. ..... Cheek, O. H., Dublin

1929 HONOR ROLL

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 6, 1928.
2. Stewart-Webster Counties, Dr. J. M. Kenyon, Richmond, November 12, 1928.
3. Pike County, Dr. M. M. Head, Zebulon, December 1, 1928.
4. Dougherty County, Dr. I. M. Lucas, Albany, December 18, 1928.
5. Turner County, Dr. J. H. Baxter, Ashburn, December 28, 1928.
6. Lamar County, Dr. John M. Anderson, Barnesville, January 14, 1929.
7. Jasper County, Dr. E. M. Lancaster, Shady Dale, January 19, 1929.
8. Ben Hill County, Dr. L. S. Osborne, Fitzgerald, January 21, 1929.
9. Taylor County, Dr. J. C. Hind, Reynolds, January 29, 1929.
10. Monroe County, Dr. J. O. Elrod, Forsyth, February 6, 1929.
11. Barrow County, Dr. W. L. Matthews, Winder, February 7, 1929.
12. Dooly County, Dr. F. E. Williams, Vienna, March 8, 1929.
13. Macon County, Dr. C. P. Savage, Montezuma, March 8, 1929.
14. Crisp County, Dr. J. N. Dorminy, Cordele, March 19, 1929.
15. Stephens County, Dr. C. L. Ayers, Toccoa, March 26, 1929.
16. Emanuel County, Dr. R. C. Franklin, Swainsboro, March 26, 1929.
17. Cobb County, Dr. L. L. Welch, Marietta, March 26, 1929.
18. Terrell County, Dr. Logan Thomas, Dawson, April 22, 1929.
19. Henry County, Dr. H. C. Ellis, McDonough, May 8, 1929.
20. Sumter County, Dr. Sylvester Cain, Jr., Americus, May 8, 1929.
21. Upson County, Dr. R. L. Carter, Thomaston, May 14, 1929.

DISTRICT HONOR ROLL

Third District, Dr. G. Y. Moore, Cuthbert, June 1, 1929.

NEW MEMBERS FOR 1929

Blake, H. H., Savannah.
Cochran, A. H., Atlanta.
Elder, O. F., Atlanta.
Patton, F. J., Atlanta.
Schwalb, Otto W., Savannah.
Smith, Lewis M., Atlanta.
Tidmore, T. L., Atlanta.

DISTRICT MEETINGS

DATES AND PLACES

Second District, October 11th, Thomasville.

Third District, November 13th, Dawson.

Sixth District, November, Griffin.

Eighth District, Wednesday, August 14th, Athens.

Ninth District, Wednesday, September 18th, Winder.

Tenth District, August, Augusta.

Twelfth District, January, Eastman.

THIRD DISTRICT MEETING

The Third District Medical Association, held its forty-fourth semi-annual session at Ashburn June 19th, as the guest of the Turner County Medical Society, with about fifty-five physicians and their wives in attendance.

Following the invocation by Rev. J. S. Winn, pastor of the Baptist church, a most cordial address of welcome in behalf of the city was delivered by Hon. E. A. Rogers, and in behalf of Turner County Medical Society by Dr. J. H. Baxter. Responded to in behalf of the Third District Medical Association by Dr. J. G. Dean, of Dawson, Ga.

The first part of the scientific program consisted of a "Public Health Symposium," with papers entitled as follows:

"The Protein Manifestation of Malaria," by Dr. J. H. Baxter, Ashburn.

"The Control of Malaria," by Dr. M. E. Winchester, State Board of Health, Atlanta.

"The Prevention of Typhoid Fever, and Related Diseases," by Dr. J. D. Applewhite, Bibb County Health Officer.

"Brill's Disease," by Dr. V. O. Harvard, Arabi.

"State Board of Health Legislative Program," by Dr. M. E. Winchester, Atlanta.

The second part of the scientific program was opened with a lecture by Dr. E. C. McCurdy, of Shellman, on "A Better Medical Organization." This should have been heard by every doctor in the state of Georgia.

Dr. Wm. R. Dancy, of Savannah, delivered a most inspiring and instructive address on the many valuable and important objectives, in regard to the future progress and success of the medical organizations of Georgia.

At the conclusion of Dr. Dancy's address, upon a motion, a rising vote was unanimously given, pledging the support and cooperation of the Third District Medical Association in his efforts to obtain successful results for the medical organizations of Georgia.

Last, but not in the least, and address by the retiring Councilor of the Third District and President-Elect of the Medical Association of Ga., oud illustriou Dr. G. Y. Moore, of Cuthbert, delivered a most interesting and timely report of his activities as Councilor as well as valuable admonitions, concerning the future welfare of the medical organizations throughout Georgia. Through his easy manner and pleasant smiles, together with his conception of what medical organizations mean to every fellow practitioner throughout the state, he has made the entire Third District one hundred per cent in membership. And we bespeak for him and Dr. Dancy, within the next two years, through their efforts a one hundred per cent for the Medical Association of Georgia.

At 8:30 all the doctors, their wives and friends, were conducted to the community stadium, where a delightful barbecue was served by the Woman's Auxiliary of the Turner County Medical Society, which was highly enjoyed by all that availed themselves of the opportunity to attend.

The next session of the Third District Medical Association will be held at Dawson November 13, 1929.

We were particularly honored in having with us some of the most distinguished members of the profession of the state, who by lectures and discussions added greatly to the interest of the meeting; viz.: Drs. Allen H. Bunce, Secretary of the Medical Association of Georgia; Mark S. Dougherty, M. E. Winchester, State Board of Health, Atlanta; Dr. J. D. Applewhite, Health Commissioner, Macon; Dr. A. E. Russell, Tampa, Fla.; Dr. Wm. R. Dancy, President Medical Association of Georgia.

Chas. A. Greer, M.D.
Secretary-Treasurer.

BISMUTH IS ABSORBED

Roentgenograms and reports of eleven cases made by Montague L. Boyd, Atlanta, Ga. (Journal A.M.A., July 27, 1929), demonstrate that pottasium bismuth tartrate is satisfactorily absorbed, as far as can be told by roentgenograms, if it is given in the proper dose, at the proper dose interval, with the proper technic, and with suitable massage of the buttock immediately after the injection and daily or several times daily throughout the course of treatment. Boyd stresses the need of keeping the needle full of water when it is inserted, so that in case the end is in a vein the blood can be made to flow back into the syringe the more readily.

WOMAN'S AUXILIARY
MEDICAL ASSOCIATION OF GEORGIA
OFFICERS

President—Mrs. Marion T. Benson, Atlanta.
President-elect—Mrs. Chas. C. Harrold, Macon.
1st Vice-President—Mrs. J. A. Selden, Macon.
2nd Vice-President—Mrs. H. D. Allen, Sr., Milledgeville.
3rd Vice-President—Mrs. J. A. Redfearn, Albany.
Recording Secretary—Mrs. Lee Howard, Savannah.
Corresponding Secretary—Mrs. W. H. Garrison, Clarkesville.
Treasurer—Mrs. Chas. E. Waits, Atlanta.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Editor—Mrs. C. W. Roberts, Atlanta.

DELEGATES TO A. M. A. (1930)

Mrs. William R. Dancy, Savannah.
Mrs. C. C. Hinton, Macon.

DELEGATES TO S. M. A., MIAMI

Mrs. J. Cox Wall, Eastman.
Mrs. Ralston Lattimore, Savannah.

THIRD DISTRICT MEETING

The Woman's Auxiliary of the Third District met at the Francis Hotel, Ashburn, June 19th. In the absence of the President, Mrs. B. T. Wise, Americus; Mrs. F. M. Mullino, of Montezuma, presided.

The meeting was opened by invocation by Mrs. C. C. Hinton, Macon.

In response to the roll call representatives from eight county societies were present, one to four members from each society. The reading of minutes was dispensed with, as a Recording Secretary was not elected at the previous meeting. Mrs. Frank Ward, of Fitzgerald, was elected to this office.

There being three state officers present, they were introduced in a most charming manner by Mrs. Mullino, the officers being Mrs. Marion T. Benson, Atlanta, President; Mrs. J. A. Selden, Macon, Chairman of the Health Film Fund; Mrs. C. C. Hinton, Macon, Past President.

Mrs. Benson gave a most comprehensive report of the state meeting in Macon, which was held last May. She also outlined the aims and purposes of the Auxiliary and brought much inspiration to those present.

Mrs. Selden spoke of the Health Film Fund, urging each county Auxiliary to donate liberally to this fund that these very educational films might be maintained and in turn used by the respective local organizations in putting on health programs in their communities.

Mrs. C. C. Hinton spoke of the opportunities of the Auxiliary, especially in directing health work in city and rural schools, realizing that doctors' wives were in a better position to assist the making of better health conditions.

Dr. William R. Dancy, President of the Medical Association of Georgia, was introduced and gave a very enthusiastic talk on the Student Aid Fund for medical students. This fund is to be raised by the Woman's Auxiliary of the state.

The meeting adjourned and members were directed to the beautiful colonial home of Mrs. Clinton Shingler, where they were entertained at tea. Later in the evening they were joined by their husbands and all were entertained at a barbecue dinner.

MRS. FRANK WARD,
Rec. Secretary, Third District.

COMMUNICATIONS

American Association For the Study of Goiter
To the Editor:

The Executive Council of the American Association for the Study of Goiter has instructed me to inform you that a prize of three hundred dollars ($300.00) and a medal of honor will be awarded by the Association to the author of the best essay based upon original research work on any phase of goiter, presented at their annual meeting at Seattle, Washington, in September, 1930.

Competing manuscripts must be in the hands of the Corresponding Secretary by July 4th, 1930, so that the award committee will have sufficient time to thoroughly examine all data before making the award.

Full particulars of other regulations governing details of the offer will be furnished on application.

If you will kindly give the contents of this letter full publicity, especially among those interested in research work, we will greatly appreciate it.

The American Association for the Study of Goiter hopes this offer will stimulate valuable research work on the many phases of goiter, especially on its basic cause.

J. R. YUNG, M. D.
Corresponding Secretary.

Terre Haute, Indiana.
July 9, 1929.

BOOK REVIEWS AND ABSTRACTS

BOOK REVIEW

Text Book of Clinical Neurology, by M. Neustaedter, M.D., Ph.D. Publishers: F. A. Davis Company, Philadelphia: 228 illustrations, 602 pages, 1929.

This work is well suited to the student and general practitioner since it not only covers the subject but is clear and concise. The illustrations are good and emphasizes certain points that would otherwise have been overlooked. The original chapters on poliomyelitis, encephalitis and tremors, are excellent and worthy contributions in Neurology. They should be read by all physicians. It is a pleasure to recommend this work to the student and practitioner.

NEWDIGATE M. OWENSBY, M. D.

The Nose—Thoat—and Ear and Their Diseases, by Chevalier Jackson, M.D., Sc.D.,LL.D., F.A.C.S. and George Morrison Coates, A.B.M.D. Philadelphia. With original contributions by American and European Authors. Cloth. Pp. 1177, with 657 illustrations, 27 inserts in colors, 1929, W. E. Saunders Company, Philadelphia.

The W. B. Saunders Company, noted for the exceptional quality of their medical productions from both a literary and a typographical point of view, have presented in this work their most valuable contribution. It not only represents the views of that master Bronchoscopist and Esophagopist, Chevalier Jackson, assisted by the Otologist, George Morrison Coates, but the views of every physician in America and Europe whose achievements have made their views worthy of consideration. Never before has such a valuable contribution to medical science been incorporated in one volume. Historical data have been eliminated in order to present WHAT TO DO and HOW TO DO IT, which is what the practitioner needs most. There is no padding. The prevailing opinions of today are given in such a manner that any intelligent physician can grasp them. After one has finished reading this work he can truly say that he has the modern viewpoint of the subject and is acquainted with every modern idea. There is more to be gained from a careful reading of this book than from a three months post-graduate course in Europe. The reviewer has been a student under Chevalier Jackson and is one of his most ardent admirers, but in reviewing this work he has tried to leave out all feelings of personal friendship and analyze the work from an unbiased point of view. Both Dr. Jackson and the Saunders Company are to be congratulated in presenting such work to the medical profession and the physician who can have this work in his library is indeed fortunate.

MURDOCK EQUEN. M.D.

An Index of Symptomatology, by various writers. edited by H. Letheby Tidy, Assitant Physician St. Thomas' Hospital, Consulting Physician Royal Northern Hospital. One hundred and thirty illustrations. 710 pages. William Wood and Company. Price $12.00.

This work covers all the branches of medicine, surgery, gynecology, and the various special subjects. It is written by twenty-six eminent English physicians and edited under the supervision of H. Letheby Tidy. The book is intended to provide an account of the symptomatology of diseases, giving a clear and reasonably full description of the clinical manifestations of each disease. It follows very closely the general outline of books on differential diagnosis. Particularly interesting is the grouping and discussion of fevers. The discussion devoted to undulant fever is excellent and worthy of separate mention. It hardly seems possible that a discussion of the fevers would be complete without mention of Tularemia; however, no mention of Tularemia is made. One single volume devoted to diagnosis in the entire field of medicine of necessity gives only the outstanding facts in relation to the various diseases. Hence the book is of limited value in the detailed study of a disease. Therapy is entirely omitted. The work is well indexed and excellently written.

M. S. D.

The Modern Practice of Pediatrics. By William Palmer Lucas, M.D., LL.D. The MacMillan Co., New York, 127 illustrations, 962 pages.

This is a comprehensive text book on pediatrics written and arranged so as to be unusually interesting and readable. The author has departed from the usual headings and strikes out from the beginning to accomplish his avowed purpose "to relate the study of the diseases of children to the positive aspects of health." The introductory chapters are taken up primarily with the history of pediatrics with a view to convincing the reader of the relative importance of prevention. The entire book is honeycombed with preventative pediatrics and, throughout, the growing, developing child is kept before you for study along with the diseases.

The author quotes Von Escherich of Vienna as saying that, "Modern pediatrics exhibits a scientific structure, including all disturbances of the life process, arranged according to scientific principles, and in its completeness not reached by any other specialty in medicine," and the reader feels when he has finished the book that in spite of space apparently unduly devoted to arguments in regard to the importance of prevention, the author has covered the subject

matter of pediatrics in all its completeness insofar as this is possible in a one-volume text book.

Therapy is adequately dealt with and a chapter is conveniently placed at the end of the book with a brief summary of diagnostic and therapeutic procedures.

The faults of the book consist chiefly of the numerous typographical errors and the indistinctness of the photographs which comprise the greater part of the illustrations.

The unique value of the book lies in the fact that no physician or undergraduate after reading it will ask a parent why a well child has been brought to him for supervision.

THOS. BOLLING GAY, M.D.

Recent Advances in Neurology. W. Russell Brain and F. B. Strauss, 1929. P. Blakiston's Son & Co., Philadelphia.

This book contains a valuable resume of recent advances in the knowledge of certain neurological disorders. The subjects are well selected, and the material covers an enormous amount of literature. As stated in the preface—"the importance accorded to methods of treatment may possibly do something towards removing the sting from criticism that the neurologist can diagnose but not treat; that neurology is an admirable academic pastime but of little use to the sufferer from nervous diseases." The book is written in simple language, and the subjects considered are those which are frequently met with in general medical practice.

WM. A. SMITH, M.D.

ABSTRACT

STRICTURES OF THE URETHRAL MEATUS IN THE FEMALE

In the Journal of the American Medical Association of June 29, 1929, Dr. Montague L. Boyd calls attention to the occurrence of strictures of the urethral meatus in the female. These strictures may be congenital in origin or may result from urethral or periurethral inflammations. Dr. Boyd feels that most of these strictures, particularly in young women or girls, are congenital in origin. Freedom of the tissues from inflammatory changes and a narrowing limited to the meatus—for example, a meatus of 20 or 22 French, or even larger at times—would undoubtedly indicate a congenital stricture of the meatus.

Whether these strictures are inflammatory or congenital in origin the effects on the urethra and bladder are identical. Urethral obstructions to the outflow of urine are, generally speaking, injurious not only in proportion to the amount of obstruction which they produce but also in proportion to their proximity to the bladder. Infections of the bladder and pelvis of the kidneys often result from urethral obstructions.

This condition presents no classical symptoms. However, in a large percentage of cases of congenital stricture in little girls there is an upward deflection of the urinary stream.

Congenital narrowing of the urethra, whether at the meatus or elsewhere, is never satisfactorily treated by dilation. Meatotomy is the treatment of choice in this condition.

BOOKS RECEIVED

Diseases of the Nervous System. A text book of Neurology and Psychiatry, by Smith Ely Jelliffe, M. D., formerly Professor of Psychiatry, Fordham University, New York, and formerly Adjunct Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital, New York City. And William A. White, M. D., Superintendent of Elizabeth's Hospital, Washington, D. C., Professor of Nervous and Mental Diseases, Georgetown University; Professor of Nervous and Mental Diseases of George Washington University, and Lecturer on Psychiatry, United States Army and Navy Medical School. Fifth edition, revised, rewritten and enlarged. Illustrated with 476 engravings and 13 plates. Contains 1,174 pages. Publishers: Lea & Febiger, South Washington Square, Philadelphia, Pennsylvania. Price $9.50.

Heart Disease—What You Should Know, by Harold E. B. Pardee, M. D., Assistant Professor of Clinical Medicine, Cornell University Medical School; Assistant Attending Physician, New York Hospital. Contains 120 pages. Publshers: Lea & Febinger, South Washington Square, Philadelphia, Pennsylvania. Price $1.50.

Bronchial Asthma—Its Diagnosis and Treatment, by Harry L. Alexander, M. D., Associate Professor of Medicine in the Washington University Medical School, St. Louis, Missouri; Associate Physician to the Barnes Hosptal, St. Louis, Missouri. Contains 171 pages. Publishers: Lea & Febiger, South Washington Square, Philadelphia, Pennsylvania. Price $2.25.

An Introduction to the Study of Physic (Now for the first time published), by William Heberden. A prefatory essay by LeRoy Crummer with a reprint of Heberden's "Some Account of a Disorder of the Breast." Portrait in photogravure and six illustrations. Contains 159 pages. Price $2.00. Publishers: Paul B. Hoeber, Inc., 76 Fifth Street, New York.

Pathology of the Acute Respiratory Diseases, and of Gas Gangrene Following War Wounds. Prepared under the direction of Major General M. W. Ireland, the Surgeon General, by Major George R. Callender, M. C., and Major James F. Coupal, M. C. The Medical Department of the United States Army in the World War. Contains 583 pages. Publishers: United States Government Printing Office, Washington, D. C.

Rheumatic Manifestations and Cardiac Disease. The group of rheumatic manifestations consists of (1) recurring tonsilitis and pharyngitis; (2) acute rheumatic fever; (3) myositis, muscle, bone and joint pains (growing pains); and (4) chorea. It might be

thought advisable to include under a fifth heading scarlet fever, pneumonia, diphtheria and other infectious diseases. But it is not generally believed that these play a prominent role in the etiology of cardiac conditions. Individuals having one or more of the affections mentioned in the above group should be considered and treated as potential cases of endocarditis. If neglected, a certain per cent of them are destined to become cardiac cases sooner or later.—*Pounders, C. M.: J. Oklahoma M. A., May,* 1929.

COMMUNICATIONS

TRUSTEE OF A. M. A.

To the Editor:

Personally, and in behalf of the Medical Association of Georgia, I wish to congratulate you and to express the profound satisfaction and keen sense of pride which all of your confreres feel at the signal honor which has been conferred upon you by the American Medical Association, which, manifesting its splendid confidence in you, selected you a member of its Board of Trustees. That you are worthy and deserving of this distinction, there is no doubt; and that you will grace this new office with superior service we are confident. We wish you all the glory and all the success attendant upon your latest honor.

WM. R. DANCY, M. D.,
President, Medical Association of Georgia.

Savannah, July 29, 1929.

To the Editor:

I acknowledge with thanks the receipt of the July, 1929, issue of the Journal of the Medical Association of Georgia, which was forwarded to me.

I note, with interest, what Dr. Thrash had to say about our Atlanta Proceedings Volume, under your section of Book Reviews and Abstracts.

I am pleased to have the opportunity to extend through you, to the profession of the State of Georgia, greetings and a most cordial invitation to attend the Detroit Assembly of the Association, scheduled for October 21 to 25, inclusive, 1929.

Anticipating the pleasure of meeting you, and many of my Atlanta friends at Detroit.

EDWIN HENES, JR.
Exec. Sec'y. Inter-State Postgraduate Medical Association of North America.

Milwaukee, July 26, 1929.

NEWS ITEMS

The Ocmulgee Medical Society met in the Leeland Hotel, Eastman, on July 5th. Dr. Wm. R. Dancy, President of the Association, read a paper entitled Cardiospasm. The next meeting of the society will be held at Cochran on September 6th.

Dr. George F. Eubanks, Jr., announces the location of his office in suite 549 Hurt Building, Atlanta.

The Wilcox Medical Society met at Pitts on June 27th. Dr. J. M. C. McAllister, Rochelle, read a paper on Infant Diarrhoea. The next meeting of the society will be held at Pineview with Dr. E. C. Harris, Rochelle, on the program for the leading paper.

Dr. Jack W. Jones, Atlanta, read a paper on Skin Diseases and Their Prevention before the Calhoun County Medical Society at Anniston, Alabama, on June 25th.

Dr. George L. Echols, Milledgeville, is taking a course of study at the Boston Psychopathic Hospital, Boston, Massachusetts. He will continue his study there until October 1st. Dr. Echols will spend several weeks at the New York Psychopathic Institute under Dr. Geo. H. Kirby and Dr. Lawson T. Lowry.

Dr. Homer Blincoe, Atlanta, is taking a postgraduate course at the Wistar Institute of Anatomy and Biology at Philadelphia.

Dr. Edwin S. Wright announces his association with Dr. Calhoun McDougall for the practice of otology, pharyngology and rhinology. Offices in the Medical Arts Building, Atlanta.

During the month of May, 1929, more tuberculin tests were applied to cattle in connection with the cooperative tuberculosis eradication work than in any previous month, according to a summary of the work issued by the Bureau of Animal Industry, United States Department of Agriculture.

The Thomas County Medical Society met at Meigs on July 9th. Drs. Chas. K. Wall and Wm. W. Jarrell of Thomasville, read papers.

Dr. J. Z. Patrick, Pulaski, entertained the members of the Bulloch-Candler Counties Medical Society together with a number of physicians from Savannah to a fish fry at Lake Church on July 10th.

The United States Civil Service Commission announces the following open competitive examination: Physiotherapy aide to fill vacancies in the hospitals of the Veterans' Bureau and the Public Health Service throughout the country. Application must be on file with the United States Civil Service Commission, Washington, D. C., not later than September 10th. Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or the Secretary of the U. S. Civil Service Board of Examiners, at the post office or customhouse in any city.

Dr. Hamilton G. Ansley announces his association with his father, Dr. W. S. Ansley, Decatur, for the practice of medicine.

Dr. J. M. Byne, Jr., graduate of the University of Georgia Medical Department, has located at Waynesboro for the practice of medicine.

Dr. W. L. Pomeroy, Waycross, announces his association with Dr. Raymond L. Johnson for the practice of medicine.

The Spalding County Medical Society met at the Griffin hospital, Griffin, on July 16th.

The Jefferson County Medical Society met at the Hotel Jefferson, Louisville, on July 12th. A number of important cases were reported and discussed. Resolutions were passed endorsing the Basic Science bill.

The Randolph County Medical Society met at Cuthbert on August 1st. Dr. B. T. Wise, Americus, Councilor for the Third District, delivered an address. Dr. A. L. Crittenden, Shellman, gave a Case Report.

Medical examinations have been given children of school age at all the Atlanta schools prior to the opening of the regular term in September. The examinations were for vaccination and other medical attention which may have been needed by students.

Dr. Lloyd B. Taylor, Savannah, has been appointed Captain of the Medical Detachment of the 118th Field Artillery and attended the annual encampment at Camp Jackson, South Carolina. He succeeded Dr. A. A. Morrison, Savannah, who resigned because of his inability to attend the encampment.

The First District Medical Society met at Hotel DeSoto, Savannah, on July 18th. The scientific program was made up of the following titles of papers: The Use of Plasmochin in the Treatment of Malaria by Dr. R. L. Miller, Waynesboro; Interpretation of Symptoms Associated with Acute Abdominal Lesions by Dr. J. S. Rhame, Charleston, S. C.; X-Ray Therapy with Especial Reference to Its Pallative Effects in Inoperable Malignancies, Hodgkin's Disease and Leukemia by Dr. Thomas Harrold, Macon; Melanoma by Dr. Everett L. Bishop, Atlanta; Strabismus from a Social Aspect by Dr. B. H. Minchew, Waycross; Some Principles Employed in the Treatment of Fractures by Lawson Thornton, Atlanta; Address on Disease Control and Prevention by Dr. Wm. R. Dancy, President of the Association.

OBITUARY

Dr. Benj. F. Johnson, Garfield: Member; University of Georgia Medical Department, Augusta, 1896; aged 57; died at a private hospital on June 29, 1929, after an illness of short duration. He was a prominent physician of Emanuel County and regarded as one of its outstanding citizens. Dr. Johnson was identified with the church and stood for every progressive movement for the betterment of his community. Surviving him are his widow, one daughter, Mrs. L. G. Coleman, Garfield; two sons, B. F., Jr., and Lamar Johnson, Garfield. Funeral services were conducted from Hebrin Church and interment in the church cemetery.

Dr. Robert C. Wiley, Sparta: University of Georgia Medical Department, Augusta, 1877; aged 75; died at his home on July 16, 1929. He practiced medicine in Hancock County for nearly fifty years, was known and held in high esteem by all the people of that section. Dr. Wiley was a member and senior elder of the Presbyterian Church. Surviving him are his widow, three sons, Sam H. Wiley and R. C. Wiley, Jr., Sparta, and Dr. John D. Wiley, Milledgeville; one daughter, Mrs. Alfred Marshall, Garnett, South Carolina. Funeral services were conducted by Rev. William T. Herman and interment in the city cemetery.

Dr. William E. Farley, Columbus: Atlanta College of Physicians and Surgeons, Atlanta, 1901; aged 56; died at a private hospital on July 16, 1929, after an illness of only a few days' duration. He had been a practicing physician in Columbus for about twelve years. Dr. Farley formerly practiced at Hamilton and other villages in the Chattahoochee Valley section. He was born and reared in Seale, Alabama. Surviving him are his widow and one son, William Farley. Funeral services were conducted from the residence by Rev. Alex Copeland, of Hamilton, and interment in the Hamilton cemtery.

Dr. Robert C. Moseley, Atlanta; Emory University School of Medicine, 1893; aged 58; died on June 28, 1929, at a private sanitarium after an illness of a year. He had resided in Atlanta and practiced medicine for twenty years. Surviving him are his widow, two brothers, B. T. and D. A. Moseley, Athens; two sisters, Mrs. Lizzie Welch and Mrs. Nell Murray, Athens.

Dr. Harvey Otis Byrd, Atlanta; member; Atlanta School of Medicine, Atlanta, 1908; aged 44; died on June 28, 1929, at his residence after an illness of several weeks duration. He moved to Atlanta from Scranton, S. C., nine years ago. Dr. Byrd was a prominent physician and surgeon and was active in the fraternal and civic life of the city. Surviving him are his widow, two daughters, Misses Dorothy and Lucy Byrd; one son, Jack Byrd. Funeral service were conducted from the Western Heights Baptist Church by Rev. Albert Penn. The body was removed to Scranton, S. C., for interment.

The Nose, Throat and Ear and Their Diseases. The Nose, Throat and Ear and Their Diseases: In original Contributions by American and European authors. Edited by Chevalier Jackson, M.D., Professor of Bronchoscopy and Esophagoscopy in the University of Pennsylvania, in the Jefferson Medical College, and in the Graduate School, University of Pennsylvania, and George M. Coates, M.D., Professor of Otology, Graduate School, University of Pennsylvania. Assisted by Chavelier L. Jackson, M. D., Assistant in Bronchoscopy and Esophagoscopy, University of Pennsylvania. Octavo volume of 1,177 pages with 657 illustrations and 27 inserts in colors. Philadelphia and London. Cloth. $13 net. Publishers: W. B. Saunders Co., West Washington Square, Philadelphia, Pennsylvania.

A PLEA FOR FURTHER COOPERATION AND SUPPORT

(Continued from Page 381)

most thoughtful, the higher types of young women from entering our schools of nursing unless those responsible for them take our schools back to their early organization of autonomy, of support and provision by the hospitals of adequate clinical and theoretical instruction upon a high plane. I am convinced the greatest contribution to the economic care of the sick that the physicians of Georgia who are responsible for hospitals could make would be a frank appraisal of nursing costs with and without student nurses, and incidentally such information would make a valuable contribution to nursing education. I believe our communities would be as ready to assume the costs of nursing education as they are to provide for schools for engineering, agriculture, teaching and other vocations concerned with the common welfare of the people, and the public should be the judge of whether, if this is to be an assessment, it should not be carried by the entire citizenship rather than by those who are caught in the maelstrom of illness due to conditions ofttimes for which the public is responsible.

Sickness costs are not intelligently considered. Michael Davis says: "Our spending habits for sickness are less than our spending ability.

It is the unevenness of the burden of sickness, not its total amount, which creates most of the present financial problems," and suggests the group insurance plan applied to the problem.

The American Medical Association, in one of its hospital studies, makes the statement "The current opinion of the public, church members and others alike is that the care of the sick is a burden that should be borne by the whole community, regardless of what organization may take the lead in any hospital project." Buffalo, Cleveland, Cincinnati, Detroit, Rochester and other cities are pooling community funds through community chests and including hospitals and visiting nurses' associations—and to this point might be added nurse registries—in helping to solve the problem.

What stands in the way of such development in our state? Many minor things, but chief among them is the individuality and lack of organization and the private interests of physicians who own and operate the hospitals and nursing schools connected with them.

To physicians who belong to this group, and who I presume are not memebrs of the Medical Asosciation, may be credited the plan to overthrow present nursing legislation in Georgia, and substitute other legislation which shall embody amendments as to organization, standards, length of training, etc., resulting in lowered requirements for our schools.

May I plead the support of the organized physicians of the state for the present enactment governing nursing, at least until a longer time has elapsed in which to determine the results of the 1927 enactment, and the completion of the work of the National Committee on the Grading of Nursing Schools? Thus far we may say we have influenced the schools for the better in enforcing a two-year high school entrance requirement, which has long been in force but has been disregarded in a number of our schools under the permissive act. We have increased the number of registered nurses in the smaller communities. The nurses of the state have co-operated almost unanimously (only a few absolutely disregarding the law—one connected with a County Health Department, and one connected with a privately owned sanitarium. In both these instances had the physicians employing them desired to support the law in regard to nursing they would have undoubtedly registered rather than lose their positions.) Of the 2725 nurses qualified to practice for 1928, 2,517 have renewed their registration for 1929. Undoubtedly some have left the state and some have ended their careers by the three ways common to the professions of women—matrimony, missionary and sanitarium ways. The nurses participated in the formation of the Hospital Association as commissioned by your organization at the last meeting. At the initial meeting the greater portion of the assembly was composed of nurses. The first annual

meeting is being held today, as you undoubtedly have heard from the report of your Hospital Committee, of which Dr. Lentz is the chairman. The Board of Examiners of Nurses and the State Nurses' Association work very closely in harmony, and mutuality of understanding. We bespeak the further co-operation of the organized physicians of the state and the hospital groups also—not to further the particular interests of nurses, but to advance the interests, present and future, of patients (they may safely rest there) to whose welfare our professions are dedicated jointly through the hospitals, and separately through our members.

PRESIDENT'S TOUR*

Southern Medical Association Meeting

Miami—November 19, 20, 21, 22

Schedule for the President's tour from Savannah, Ga., to Miami, Fla.

November 17, 1929

Miles		
0	Leave Savannah	7:00 A. M.
84	Arrive Brunswick	9:30 A. M.
	Stop in Brunswick for incidentals one - half hour.	
	Leave Brunswick	10:00 A. M.
70	Arrive Jacksonville	12:00 Noon
	Stop in Jacksonville one hour for lunch.	
	Leave Jacksonville	1:00 P. M.
41	Arrive St. Augustine	2:15 P. M.
	Stop in St. Augustine one-half hour.	
	Leave St. Augustine	1:45 P. M.
31	Arrive Bunnell	3:45 P. M.
26	Arrive Dayton Beach	4:30 P. M.
	Spend night at Daytona Beach.	

Second Day

November 18, 1929

Leave Daytona Beach 8:00 A. M.

AMERICAN ILLUSTRATED DICTIONARY

Revised by an Editorial Staff of the American Medical Association under the direction of Dr. Morris Fishbein, Editor of the Journal.

Terminology conforms to accepted standards of scientific societies.
2500 additional new terms—100 additional illustrations.
The New Standard in professional circles.
1427 pages, with 525 illustrations, 107 in colors.
Size of book—6″ x 9″ — only 1¾″ thick.
Contains hundreds of new words to be found only in this book.
15th edition, price $7.00 net; with thumb index $7.50 net.

W. B. SAUNDERS CO.
Philadelphia

J. A. MAJORS CO.
New Orleans

Send your order to

FRANK B. NEELY, Representative

BOX 864, **MONTGOMERY, ALA.**

15	Arrive New Smyrna	8:30 A. M.
51	Arrive Cocoa	10:00 A. M.
22	Arrive Melbourne	10:45 A. M.
48	Arrive Ft. Pierce	12:00 Noon
	Half an hour for incidentals.	
	Leave Ft. Pierce	12:30 P. M.
59	Arrive West Palm Beach	2:00 P. M.
	One hour for lunch.	
43	Leave W. Palm Beach	3:00 P. M.
23	Arrive Ft. Lauderdale	4:30 P. M.
	Arrive Miami	5:15 P. M.

*The Presidents of the Medical Association of Alabama, North Carolina, South Carolina and Tennessee are invited to join the President's tour at Savannah, Georgia, on November 17th at 7:00 A. M.

AWTRY & LOWNDES
FUNERAL DIRECTORS.
AMBULANCE SERVICE

No Starch
Listers
CASEIN-PALMNUT
Dietetic Flour
Starch-free Diabetic Foods that are appetizing are easily made in the patient's home from Listers Flour. It is self-rising. Ask for nearest depot or order direct.
LISTER BROS. Inc., 41 East 42nd St., NEW YORK

OCULISTS' PRESCRIPTIONS
When your oculist gives your prescription for glasses, ask him about our reliability, accuracy and high-class optical service.
He knows you will get what he orders here
WALTER BALLARD OPTICAL Co
TWO STORES
105 PEACHTREE ST. CLOCK SIGN | MEDICAL ARTS BLDG. 382 PEACHTREE ST.
ATLANTA, GA.

THE WALLACE SANITARIUM
SUCCEEDING WALLACE-SOMERVILLE SANITARIUM, MEMPHIS, TENN.
MEMPHIS, TENN.
WALTER R. WALLACE, M.D.
HUGH W. PRIDDY, M.D.
FOR THE TREATMENT OF
DRUG ADDICTIONS,
ALCOHOLISM, MENTAL AND
NERVOUS DISEASES
LOCATED IN THE EASTERN SUBURBS OF THE CITY. SIXTEEN ACRES OF BEAUTIFUL GROUNDS. ALL EQUIPMENT FOR CARE OF PATIENTS ADMITTED.

EAGER & SIMPSON

SURGICAL CORSETS
ABDOMINAL SUPPORTS
UPLIFT BRASSIERES, ETC.

8 N. Forsyth St. Atlanta

Walnut 4972

Lac-Bismo
(HART)

See Description, Journal A.M.A.
Volume XLVII, Page 1488.

A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water. Each fluidrachm contains 2½ grains of the combined salts in an extremely fine state of subdivision.

MEDICINAL PROPERTIES: Gastric Sedative, Antiseptic, Mild Astringent and Antacid.

INDICATIONS: In Gastro-Intestinal Diseases, Diarrhoea, Dysentery, Cholera-Infantum, etc. Also suitable for external use in cases of ulcers, etc.

E. J. HART & CO., Ltd.
Mfg. Chemists
New Orleans

P S A A

LET US COLLECT YOUR SLOW ACCOUNTS FOR YOU.

COMMISSIONS AS LOW AS 25%. NO OTHER CHARGES.

Endorsed by American Medical Association and State Societies. References: Bradstreets; Chamber of Commerce; Commerce Trust Co. or publishers of this journal. Satisfied clients everywhere.
SEND FOR LIST BLANKS

Physicians & Surgeons Adjusting Association
RAILWAY EXCHANGE BUILDING. KANSAS CITY, MO.

SITUATIONS WANTED

WANTED: Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians', 320 N. Michigan Ave., Chicago, member The Chicago Association of Commerce.

DAVIS-FISCHER SANATORIUM

25 EAST LINDEN STREET
ATLANTA, GEORGIA

Between Peachtree and West Peachtree Streets.

Fireproof buildings, modern in every respect, for the treatment of surgical, gynecological, and obstetrical cases; a limited number of medical cases admitted. No mental or alcoholic cases or drug addicts admitted. Laboratories complete for all modern investigations and diagnoses. Also X-ray and radium treatment. Training school for nurses.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | September, 1929 | No. 9

ARTHRITIS DEFORMANS*

Diagnosis, Treatment and Rehabilitation

WILLIAM S. BAER†, M.D.
Baltimore, Md.

I am bringing this subject before you today with the idea of making clear, if possible, the differentiation between the various types of arthritis deformans. We are speaking very loosely at present by using the term, arthritis deformans, and probably we are dealing with more than one disease. It is, therefore, very necessary for us to differentiate closely between the various types, for the therapeutic remedies needed for the cure of these types are very different. We must also understand that when we have cured our disease we have not cured the patient, but that rehabilitation of the various joints has yet to be accomplished before the patient can be returned to his or her normal activity. For therapeutic purposes, therefore, arthritis deformans may be divided into three classes: Arthritis deformans of the infectious type; arthritis deformans of the atrophic type; arthritis deformans of the hypertrophic type. Let us take up these three classifications separately and look at them from a pathological, clinical and an x-ray point of view and discuss the means of treatment and the rehabilitation of the patient belonging to each group.

Arthritis Deformans of the infectious type, or chronic progressive arthritis: Clinically, this is a disease primarily of young people. We find it in children as so-called Still's disease; and also in older people, particularly about the time of menopause, but as I have said, it generally comes on at the time of puberty. In its pathology we have a swelling of various joints. There is an increase of fluid in the knee joints, a round cell infiltration of the fibrous lining of the joint (capsule), a hypertrophy of the synovial membrane, and some fibrin formation at times, within the joint itself. Owing to the round cell infiltration, contractions of the ligaments and tendons about the joint take place. The joint itself becomes swollen, due to the fluid and hypertrophy of the synovial membrane, in a symmetrical manner. Consequently, the swelling is soft, and when it occurs in the fingers it generally attacks the middle phalangeal joint and a pear-shaped deformity is the result. If it attacks the joints, like the spine, a slight amount of new bone formation may occur at the attachment of the lateral or anterior ligament to the spine. The swelling in the joints is fluid in character and of a tension that only fluid or hypertrophied synovial membrane can give. As a rule, there is no new bone formation to be seen in these joints. The clinical picture is very definite and very positive—a disease coming on primarily in younger people, generally following some infectious process in the body. It may occur in children as Still's disease, or later in life following the grippe, nasal, pelvic and other infections. In these cases there may be a slight temperature, both general and local, although the amount of local temperature is extremely mild. One recognizes very early the swelling within the joint and readily can determine if that swelling is soft in character, as fluid not under great pressure, or synovial membrane pads. In the hands, therefore, we have the typical Hogarth node. Curiously enough, when the swelling begins in the hand it al-

*Read before the Medical Association of Georgia ,Macon, Ga., May 8, 1929. Invited guest, Abner Wellborn Calhoun Lectureship.

†Clinical Professor of Orthopedic Surgery, Johns Hopkins University, Baltimore, Md.

I am indebted to the laboratory of Drs. Baetjer, Miller and Rowe, to the laboratory of Dr. Harold L. Amoss of the Johns Hopkins Hospital, and especially to Miss Poston, of that laboratory; also to Miss Elizabeth Knight, of the laboratory of the Children's Hospital School, for the bacteriological work and the making of the vaccines.

No. 1 No. 2 No. 3

1. Arthritis deformans of the atrophic type.
2. Arthritis deformans of the hypertropic type.
3. Arthritis deformans of the infectious type.

most invariably begins in the middle phalangeal joint. The knuckles then may become involved, but rarely ever are the distal phalangeal joints of the fingers a part of the process. In the knee joint we have a similar expression, which is that of fluid and thickened synovial membrane. This may go on to involvement of the ankles, the hips, shoulders, temporomaxillary and other joints. At times the spine, and spine alone, may be involved in the process with slight new bone formation and marked stiffening of the back which results in a loss of the normal spinal motions. Occasionally, as in Marie Struempell type of the disease, not only do we get a lost motion in the spine, but also the shoulders and hips may become involved in the process. On moving the joint, particularly the knee joint, a definite soft purring sound may be heard by auscultation, and even felt by manual examination. This purring, which is due to synovial membrane rubbing, is entirely different in sound from that which one gets in the hypertrophic type of arthritis deformans. The blood picture in a case of arthritis deformans of the infectious type shows very little change from the picture of normal blood except that the leucocytosis is raised slightly in most cases, that there is a mild grade of secondary anemia, and that the polymorpho-leucocytes are slightly increased at the expense of the lymphatic elements. The x-ray picture is rather characteristic, in that if the radiogram is taken there is found an appearance of fluid and the joint is distended and the shadows are changed by the thickening of the synovial membrane. There is some atrophy of the bone, particularly in its epiphyseal portions, so that a slight osteoporosis has taken place and this porosis is probably due to the lessened activity of the part. Small spurs are often found at the attachment of ligamentous or tendinous structures within the joint, such as on the tibial spines in the knee, and at the attachment of the quadriceps muscle and patella tendon to the patella. In joints like those of the spine, small spurs are evident at the attachment of the ligamentous structures to the sides of vertebral bodies. In general, therefore, the diagnostic picture is one of a joint swollen by fluid, having a definite tension due to that fluid or thickened synovial membrane, slight local temperature associated with contractions always in flexion.

The treatment of arthritis deformans of the infectious type should be aimed first at stopping the infectious process, and after the infectious process has been overcome, then, and then only, should methods of repair and restoration of joints be instituted. Before taking up the question of treatment, the etiological factors in the production of this type of arthritis deformans must be considered. There are, of course, many views upon this matter. Some believe that it is entirely a digestive condition. Others believe that the cause is due to an internal secretion. Others believe that it is entirely an infectious process. Some think that this infectious process is due to a parasite, amoebic in character. Others believe that it is infectious and that the infection is due to a bacterial invasion. After sifting the various theories and the evidence which has been brought forward in substantiation, I think one can hardly get away from the fact that the bacteria in one form or another is the etiological factor in the production of the trouble. The question as to whether there is a specific organism of arthritis deformans of the infectious type cannot yet be definitely answered, although the more a specific organism for its cause. One organism after the other is being eliminated and today I think that most of us believe that it is some form of streptococci which is the etiological factor. And the evidence is growing daily that it is some form of non-hemolytic streptococcus which is most liable to be the exact cause. The organism gets into the

body, probably by the blood supply, and may lodge in some organ from which it cannot readily escape. The local focus of infection, therefore, may be in the frontal sinuses, the ethmoids, sphenoid, the tonsils, the teeth, the middle ear, the chest, the gall bladder, the appendix, the gastrointestinal tract, the kidneys, the tubes, the bladder or in other inaccessible parts of the human body. These organisms are then carried by the blood supply to the various joints and set up their pathological changes in the fibrous tissue of the joints and in the synovial membrane and may later go directly into the joint itself from which they may be captured by aspiration. I am rather inclined to think that there must be some other element present in the body which combines with the streptococcus to form arthritis deformans of the infectious type, and it is well to express it in some such manner—infection plus X, equals Arthritis Deformans of the Infectious Type. What is "X?" This, at the present time, we cannot answer. We may express it by saying that "X" is hereditary, for we know that many people are invaded by the streptococcus who do not get arthritis deformans. If there is no specific organism, then something within the body must combine with the streptococcus to form the disease. "X" may be an intestinal secretion which is pathological, or "X" may be due to some mal-adjustment of the chemistry of the body. We do know that if we remove the bacterial equation then whatever "X" may be, arthritis deformans of this type. cannot be produced. The treatment, therefore, of arthritis deformans is obvious. We must do away with the bacteria that are producing the disease. At first, after a proper diagnosis has been made, the human body is subjected to a careful examination so that the state of each organ and each cavity may be ascertained, just as a merchant takes an inventory of the stock which he has in his warehouse. This, of course, demands the cooperation of many medical men, for no one person is sufficiently trained to examine the human body in its entirety. Nor can such an examination be made in any one office. I find that the best results are obtained after a four-day examination in a hospital where laboratory facilities of the highest order are present and where one can call upon his colleagues for assistance in all lines of investigation. The patient should be examined, first by the laryngologist, who reports carefully and accurately on the condition of the nose, throat, sinuses and ears; the internist gives us a picture of his patient with special reference to chronic bronchitis, bronchiectasis, abscess of the lung or abscesses along the mediastinum, for I feel that in certain cases, particularly in children, an abscess from a broken-down gland or an abscess in the lung is often the seat of the infection. The dentist carefully goes over the teeth, guided by the X-ray examination, and makes his report as to the presence of any abscesses in that region, although at the present day I believe that owing to a lack of complete study many teeth are sacrificed which would be most useful in proper mastication if they had been left alone. The gastroenterologist with his various means of examinations, including the study of stools, the fluroscopic examination of the intestines, and a complete gastrointestinal series, as well as the study of the gall bladder, aids us materially in making a positive or negative diagnosis of the condition within his field. The urologist gives us an accurate picture of the function of the kidneys, of the condition of the bladder and of the prostate gland. The gynecologist determines for us whether the tubes are involved, the condition of the bladder in the female, and the presence or absence of an endocervicitis. Further laboratory examinations are made, as a complete urinary analysis: the blood examination, both as to Wassermann and differential blood count. Blood cultures are taken to try to find out whether an organism exists in the blood; the amount of blood sugar is estimated, as well as that of the uric acid in the blood. The basal metabolism test is made to throw light on the metabolic activity of the body. Phenolphthalein tests for kidney function are made. It is evident, therefore, that from the numerous examinations which have to be made, and of the nature of many of the examinations, that hospitalization should be required until these examinations are completed. But these examinations alone are not

sufficient. The disease which started as a local infection has now become a constitutional disease involving many joints as well as ligamentous, fibrous and muscular tissues. It would not suffice, therefore, simply to remove the local focus of infection, but it is necessary to combat and overcome that which has now become a constitutional involvement. We must find out just what organism with which we are dealing. How may this be done? We are aware, of course, that we may get the organism from the local focus of infection if we succeed in localizing the focus. The removal of the local focus alone does not warrant the recovery of the patient since it has become a constitutional trouble. If the organism is obtained from some cavity which is absolutely walled-off from the outside of the world one may obtain that organism in pure culture: but the examination of most parts of the human body presents to us an organism, if found, associated with many organisms. Especially is this true from the bacteriological study of the intestinal flora, of the teeth, tonsils, etc. It is difficult, therefore, to be sure that one is dealing with the organism which is the cause of the trouble. It has been our custom to try to obtain the organism in pure culture. The organisms have been recovered in pure culture on few occasions from the blood. The organisms have been recovered in pure culture in small numbers directly by aspiration of the joint involved.

Gland Culture: The organism may be obtained in pure culture most often from the lymphatic system. The lymphatic system together with the lymphatic glands is the sewerage system for bacteria in the human body. In 1914, Rosenow pointed out that if cultures were made directly from the lymphatic glands, organisms could be obtained in many instances. The ordinary organism which affects the human body acutely, like staphlococcus, streptococcus, Welch bacillus, die out very rapidly in the glandular system. In a series of gland cultures made from so-called normal individuals, although those individuals may have had an acute infection, such as osteomyelitis, tonsilitis, tuberculosis, or what-not, in less than ten per cent were we able to recover any organism. On the other hand, we have proven that in about sixty-six per cent of all cases of arthritis deformans of the infectious type an organism in pure culture can be obtained: that of this sixty-six per cent thus obtained, eighty-five per cent of the organisms have been a non-hemolytic streptococcus, that ten per cent have been a hemolytic streptococcus, and that the other five per cent have been made of diphtheroid organisms, which are probably non-pathogenic, and a few staphylococcus albus or aureus. We have, therefore, by the removal of the gland, under perfect aseptic technique, been able to recover an organism in pure culture which is probably one element in the etiology of arthritis deformans of the infectious type. It is not easy to obtain these organisms. They do not grow rapidly. They are extremely persistent in the gland, but it takes a real tenacious and persevering bacteriologist to recover them. I should say that an average period necessary for the growth of the organism when made from a gland is at least ten days. There are many which take three weeks before they can be demonstrated, and in one case, at least, it was six weeks before the organism grew. How many bacteriologists have tenacity and steadfastness of purpose enough to continue to cultivate the gland for this period of time? The average bacteriologist, at the end of forty-eight or seventy-two hours, if he sees no growth, consigns his material to the refuse jar and thereby misses obtaining that for which he had been seeking. So by means of cultivating the gland we have a method of obtaining the organism in pure culture in sixty-six per cent of the cases. In the other thirty-four per cent our methods of bacteriology may be still too crude, or the infection may have burned itself out on account of the length of time the patient has been suffering with arthritis deformans, or the organism may by this time be so attenuated as to be beyond revivification. If a culture can be found an autogenous vaccine may be made which will later be used in the treatment of the disease. The method of preparing this vaccine is as follows:

Technique of Gland Culture: One goes

Figure II.
Before operation. Left hip-arthritis deformans of the infectious type.

Figure III.
After operation. Arthroplasty of the left hip for arthritis deformans of the infectious type.

over the lymphatic system of the body and removes a gland, be it cervical, axillary, inguinal or epitrochlear, which is nearest the joint which seems at that time to be most acute. The gland is, of course, removed under perfect aseptic technique. Immediately on removal of the gland it is taken to the laboratory so that a culture may be obtained. The gland is removed from its container with sterile forceps, flamed, and placed in the container in which it is to be macerated. A Rosenow tissue crusher is ideal for this purpose, as it is simple to use and easily sterilized. After the maceration of the gland about five c.c. of beef extract broth is added to the crushed gland. This emulsion is then used to inoculate the various media. The media used in all cases is the dextrose ascitic fluid agar tubes. The Carrel tube with dextrose ascitic fluid agar, blood agar, Loeffler's medium, brain veal agar, beef extract broth, both alone and with ascitic fluid, and beef heart infusion were the principal media. The inoculation of the Carrel tube with dextrose ascitic fluid was done as follows: The dextrose agar tubes were placed in a container of hot water, the water brought to a boil and kept boiling vigorously for fifteen minutes after the agar had melted in order to drive off the oxygen. Occasional shaking of the tube while boiling helps to get rid of the oxygen. In each of the two tall sterile culture tubes is placed three to four c.c. of sterile ascitic fluid, one c.c. of the gland emulsion is added to the ascitic fluid in one tube and in the other tube is placed the remains of the macerated gland. The melted dextrose agar which has been cooled down to about forty degrees is then poured in each tube until the tubes are two-thirds full. The sealing with sterilized vaseline makes the conditions more anaerobic. The piece of gland tissue renders the condition more favorable for anaerobes.

Preparation of Vaccine: After organisms have been obtained in pure cultures numerous tubes of various types of agar are inoculated with the organism thus obtained. After a sufficient heavy growth appears, usually within thirty-six to forty-eight hours, this is washed off with serile salt solution. This suspension is then standardized to contain one thousand million per c.c., after which it is sterilized by inactivation from fifty-six to sixty-four degrees centigrade. Tests are made on blood agar to determine that the solution is sterile.

In order to see whether the vaccine thus made from gland cultures has a specificity to that particular patient from which the organism was obtained a sensitization test on the skin is made by the vaccine. The vaccine is made by killing the live organisms by boiling. In the thirty-four per cent of cases in which we are unable to obtain an autogenous organism from the gland, a vaccine is prepared from skin sensitization tests made on the individual. At all times, strains of hemolytic and non-hemolytic streptococcus are kept in the laboratory. These cultures have been obtained, by the glandular method, from patients who have suffered from arthritis deformans and have responded to the vaccine serum. If, therefore, no culture is obtainable from the gland, the patient is sensitized to these various strains and the one that gives a skin reaction is used as a basis for making up a vaccine.

Treatment of Arthritis Deformans of the Infectious Type: The treatment in arthritis deformans of the infectious type consists in the first place of the eradication of the focus of infection. If the focus of infection can be found and if it is amenable to surgical proceedings that method is used in order to get rid of the focus of infection, or if it is amenable to therapeutic remedies that is used as a second means. For instance, if the tonsils are involved they may be removed. If the nose and throat are involved, particularly the sinuses, they should be operated upon. If it is an abscess of the lung which can be reached surgically that method is preferable. If we are sure the focus of the disease is in the gall bladder, the gall bladder should be removed. If it is a question of kidney with abscess formation the kidney should be removed. Likewise, disease of the tubes and cervix should be treated surgically. If, on the other hand, one encounters the organism in the intestinal tract it should be treated medically by proper antiseptics, by high rectal irrigations and proper medicinal methods. If the prostate is the seat of the trouble, prostatic massage should be instituted. If the focus of infection cannot be found, or if the infection cannot be properly treated when found, either surgically or medically, then vaccine therapy should be used, for this will counteract the constitutional disease with which we are dealing. The preferable method of making the vaccine is by removal of the gland, obtaining the organism and making an autogenous vaccine. When no organism is found in the gland, vaccine therapy may still be used from an organism obtained by sensitization. The mode of treatment is to begin with one-tenth of one c.c. of one hundred million solution of the vaccine. The dosage should then be increased one-tenth of a c.c. every fourth day, so that the first dose should be one-tenth of one c.c.; second dose, two-tenths of one c.c. four days later, and so on. This should be kept up until the patient has had from twelve to sixteen doses. If the reaction is marked one should wait a few days and begin again with a smaller dose. After the course of fifteen doses has been given one rests for a period of about six weeks and a second series, similarly given, should be the rule. And, indeed, in a few cases it will be necessary to give a third series. One always strives for a definite constitutional reaction of malaise, headache, and even a chill, and I am rather prone to push the dosage higher than that which I have indicated. As far as the constitutional treatment is concerned, the patient should live in the open air and be put on forced feeding with no restriction of diet whatsoever. Like tuberculosis, the more we build up the body by properly stoking the furnace the quicker will be our recovery. Heliotherapy plays an important part in stimulating the activities of the body. These patients should not be restricted in their exercise. If possible, they should not be confined to bed. Passive motion to their joints should be carried out and they should be encouraged to walk as much as possible. Osler's saying that a trained nurse is the worst thing on earth for an arthritic of this type was very true. I think that one should avoid every kind of thermotherapy, hydrotherapy, electrical treatment, and diathermy in the acute stages before the disease has been thoroughly conquered. Naturally, one should use splintage and extension so as to overcome contraction which tends to occur and thus prevent deformity. We do not claim that this method of treatment by eradication

Figure IV.
Arthroplasty of jaw for infectious arthritis. (Before operation).

Figure V.
Arthroplasty of jaw for infectious arthritis. (After operation).

of focus and vaccine therapy will cure every case, but we would say that seventy-five per cent of the patients so treated have given the most gratifying results and so impressed are we with the improvement that we believe the method should be given a much more extensive trial.

Rehabilitation: Rehabilitation differs from the treatment of the acute disease. No steps, except the prevention of deformity, should be attempted in this rehabilitation until the disease has been absolutely conquered. Attempts to improve mobility and correct deformity will be of no use and may do harm until the acute disease is over. The character of rehabilitation depends upon the amount of deformity, the pathological changes which have occurred within the joints, and the absence of all active foci. When the disease has been overcome in case of spondylitis, and if the back has not become entirely ankylosed, an attempt should then be made to straighten out the flexed spine. This is best done by means, first, of hyperextension under anesthesia with repeated plaster casts. After the back has been fairly straightened, a removable brace, either of the Taylor or Bennett variety, should be used and gradual exercises given so as to increase the power of the weakened erector spinae, quadratus lumborum and latissimus dorsi muscles. It is rather remarkable how much straightening can be accomplished if the case has not been allowed to go on to complete ankylosis. In cases where joints are involved it depends upon the amount of involvement as to the method of rehabilitation. If these are of a minor character the joints will spontaneously clear up by removal of the focus and vaccine therapy. If contractures are present they may have to be assisted by means of extension so as to overcome the changes which have taken place in the tendons and in the muscles. Thermotherapy, hydrotherapy, world-pool baths, active and passive massage, will aid in restoring the joint to its normal function. Definite exercises should be given to build up muscular strength. If the synovial membrane has been very much thickened and fibrously changed, owing to the round cell infiltration, injection of oil under anesthesia with passive motion should be given. If the thickness of the synovial membrane is of a marked degree the best method of treating such joints as the knee is by means of a complete synovectomy of the knee joint, and the results of these cases are astonishing. If the joints have gone on to a bony ankylosis, owing to destruction of cartilage by the inflammatory condition, anthroplasties will have to be done in order to regain the lost mobility. This is especially true in ankylosis of the jaw, ankylosis of the hip and in ankylosis of the elbow. One word of caution in regard to anesthesia in arthritic cases, either acute or chronic. Arthritis deformans being a constitutional dis-

Figure VI.
Synovectomy of left knee. Oil injection of right knee. Arthritis deformans of the infectious type. (Standing).

Figure VII.
Synovectomy of left knee. Oil injection of right knee. Arthritis deformans of the infectious type. (Sitting).

ease, the fibrous structures of the body are most involved and the expansion of the lung, associated, at times, with a dry pericarditis, makes the use of nitrous oxide very questionable. Indeed, the cases of arthritis deformans which I have lost with anesthesia have only been those where nitrous oxide has been the anethesia.

Arthritis Deformans of the Atrophic Type: Pathology of arthritis deformans of the atrophic type differs from that of the infectious type in that the lesions are more severe. In this type the essential feature is atrophy—atrophy of bone, atrophy of muscle, atrophy of cartilage, finally leading to ankylosis, an ankylosis that simulates a synostosis rather than an ankylosis produced by new bone formation. As a rule, the synovial membrane entirely disappears, the cartilage is entirely eroded, and one bone fuses into the other. The atrophy of the bone is so great that if a radiographic picture is made one finds an elimination of all joint spaces and the density of the bone has been so done away with that one hardly can recognize the bone from the surrounding soft parts. Clinically, the disease may start as a special entity, or it may be the end result of an infectious type of arthritis deformans. I should say that the atrophic type of arthritis deformans is the end result of the infectious type in ninety per cent of the cases when not treated. In ten per cent it starts out from the onset as a true atrophic type without the swelling of the synovial membrane or the typical picture of a Hogarth's nodosity. There is a quick and rapid destruction of tissue with atrophy accompanied with dislocation or ankylosis, and instead of the ordinary flexion deformities which one gets in the infectious type one gets bony ankylosis, but always in a position of hyperextension, particularly in the hand.

Why this should be is uncertain. Perhaps, as has been suggested, a neurological element comes into play and the joint is affected by the action of the virus on the central nervous system. Atrophic arthritis generally follows infectious arthritis in ninety per cent of cases, just as locomotor ataxia is generally followed, but not preceded, by the Charcot joint. The etiology in this type of case is probably the same as in infectious arthritis except that they are far less numerous. Instead of being able to obtain the organism from the gland in sixty-six per cent of the cases we find that we get an organism only in five per cent of the cases and that the glandular structure is practically nil. In other words, to my mind, the fire has burned itself out and has left the machinery a completely ankyloid wreck, and the glands themselves have dwindled back to normalcy because the bacteria within them have entirely been destroyed. From a clinical point of view, therefore, they show no enlargements of joints but a depression around each joint where the swelling had formerly been. They are distorted, dislocated and ankylosed in most vicious positions. There is no fever, apparently no activity present. The atrophy is extreme, of muscle and fibrous structures, and they are, for the most part, unable to be active and are confined to bed or chair. Fortunately, the number of these cases in the last ten or fifteen years has markedly grown less, and almshouses, which were formerly filled by them, have but very few. Why this change? It seems to me that as we have a better understanding of the arthritis deformans of the infectious type, and by the removal of the foci of infection and treatment by means of autogenous vaccine, we have so cut short the disease in the infectious type that the atrophic type has no longer a chance to grow.

Treatment: In the treatment of this type of arthritis nothing much is to be done. If infection still persists it is wise to treat by means of vaccine therapy.

Rehabilitation: Rehabilitation offers a very serious problem. Almost all of the joints have been destroyed so far as their cartilages are concerned. If possible, the subluxations which have occurred should be straightened. An occasional arthroplasty, or arthrodesis, at an acute angle may be done to the elbow, but as a rule the destruction has been so great that there is no longer hope of restoration. The hope lies in the prevention of the atrophic type from occurring by proper surgical and medical therapeutics in its application to the infectious type.

Arthritis Deformans of the Hpertrophic Type: Arthritis deformans of the hypertrophic type, so-called osteoarthritis or proliferating arthritis, to my mind should not be included under the term "Arthritis Deformans." It is a disease which has its own clear-cut signs and symptoms, whose etiology is entirely different from arthritis deformans of the infectious type, and there is no reason for mixing up this disease with that of the first. So many authors when they are writing about arthritis deformans include osteoarthritis. It is hard for one, therefore, when one is studying the problem, to gather the facts when based on such premises. When writing, let us recognize that we are dealing with two different diseases so that we can draw proper conclusions.

Arthritis deformans of the hypertrophic type should have a different name. I would suggest that we call it rheumatic gout. It is not to any extent a deforming process. It is the most amenable to treatment of all diseases when we properly understand its etiology.

Pathology: A deposition of bone around the edge of the synovial membrane; an osteosclerosis of bone and never an atrophy, except from slight disuse. The synovial membrane at times may be thickened but not to the extent that one finds in arthritis deformans of the infectious type. As a rule, no destruction of cartilage unless that cartilage be destroyed by pressure; no neurological element which leads to atrophy. Perhaps, at times, a slight increase of fluid within a joint like the knee, but never any increase in fluid of the joints of the hand. The osteosclerosis of bone is so great that there is no difficulty in distinguishing between the carpus and the soft parts, as in atrophic arthritis. It is a disease of new bone formation. The clinical picture is very distinct. In the first place it never occurs in

young people—rarely before the age of forty-five years. It is associated on the part of the patient by a feeling of stiffness. He feels his symptoms more in the early morning when he attempts to get out of bed than he does after he had been up for some time. After sitting for a while, playing bridge or in the movies, it may be difficult for the patient to arise, but the more he walks the more limber he becomes. The joints themselves are characteristic. There is a swelling, but that swelling is generally bone—therefore, hard on palpation and symmetrical; unlike arthritis deformans of the infectious type which is symmetrical and soft. There is no local heat, nor is there any general heat. The deformities, when they exist, deviate the joint slightly to one side owing to the presence of new bone formation within the joint. When occurring in the hands it always attacks the distal phalangeal joints, so-called Heberden's nodes. It rarely ever attacks, as does the infectious type, the middle phalangeal joints, and when it does it is always secondary to the distal joint. There is no beginning atrophy of the muscles, indeed the muscles look perfectly normal. The general health is usually good, although in many cases associated with the symptoms of constipation. The patient, as a rule, looks well. There is rarely ever any change in the normal differential count, no leucocytosis and seldom any secondary anemia. The polymorpholeucocytes are never increased proportionately. The blood examination is entirely free of any bacteria. The uric acid content of the blood may be, but is not always, increased. The glands do not show any bacteria, and the various strains of streptococci used in sensitization give no reaction. Indeed, the patient always feels extremely well, but walking is sometimes painful and stiffness is generally present, owing to the new bone formation within the joint. The spine may be involved, and when it is there are large, isolated masses of bone thrown down, not like a growing spike, but the character of a large deposition, which may press upon the nerve roots and cause pain. It is an old person's disease.

Etiology: First, heredity; second, food; third, traumatism; fourth, exposure. This is primarily a hereditary disease, not that we inherit rheumatic gout as such, but we inherit a soil which when subjected to proper conditions assumes a gouty tendency. All inherited soil is not alike, so as we inherit our faces we inherit our soil. If to this soil certain food products are brought after the glands of Lieberkuhn have disappeared then will grow osteoarthritis, so-called rheumatic gout. Such foods which generally produce the condition are sugars and acids. Sugars themselves, or those things which break down into sugars in the body, namely, starches. Therefore, one should cut off sugars, pies, pastries, cakes, candies, ice cream, white bread, starches, cornbread, hominy and such things. Now, if to this class of food is added certain acids, as tomatoes, vinegar, oranges, alcohol, preserves, then and then only will the rheumatic gout begin to appear. Traumatism aids materially in the place where these depositions are to occur. This, therefore, is a dietary question and not a bacterial one. Here the elimination should be forced and plenty of water should be taken. This is the type which improves greatly at the springs, whereas the cases of arthritis of the infectious type are markedly injured by the debilitating process of the springs themselves. Protection is the keynote in mechanical treatment—supporting braces, adhesive strap bandages, rest rather than activity, massage when the process is not active. In cases where the process is severe it is necessary at times to do an arthrotomy and remove the localized new bone formation within the knees, about the hips, so that pain may be avoided because of the pressure of the body on these new deposits. The results of treatment of rheumatic gout by means of a dietary regime and proper temporary support will give you more gratification than any type of case which will come to you. Occasionally, the process may be so bad, as in the hip joint, on account of the new bone formation, that an arthrotomy may have to be done. This would consist in removal of the excess of bone, leaving the entire neck as well as the cartilage on the head. This will restore the hip joint to normal motion without pain.

In conclusion let me say that I believe that if we recognize that we are dealing with at

least two different diseases, absolutely opposite one from the other in all their characteristics, that we shall have made a great step forward. Also, that when we recognize that what is food for one is poison for the other, that one is bacterial and the other is metabolic, that we shall be on the proper path to solve the entire problem.

BIBLIOGRAPHY

Ashcroft, L. S. and others.—Arthritis deformans: observations on its etiology and treatment. Preliminary communication.
Brit. Med. Journ. July, 1925. p. 13.

Bannatyne and Lindsay.—A note on the treatment of rheumatoid arthritis by vaccines.
Brit. Med. Journ. 1911. I. 192.

Bannatyne and Wohlmann.—Rheumatoid arthritis; its clinical etiology and pathology. (with a report of its bacteriology by Blaxall).
Lancet. April, 1896. p. 1120.

Beaton and Ainley Walker.—Etiology of acute rheumatism and allied conditions.
Brit. Med. Journ. 1903. I. 237.

Bloomfield, A. A.—The bacterial flora of lymphatic glands.
Archives Intern. Med. 1915. XVI. 197.

Bunting and Yates.—An etiological study of Hodgkin's disease.
Journ. Amer. Med. Assn. 1914. LXII. 516.

Burbank, R.—Serological significance of streptococci in arthritis and allied conditions.
Journ. Amer. Med. Assn. 1925. 84. 637.

Cole, R. I.—Experimental streptococcal arthritis in relation to the etiology of acute articular rheumatism.
Journ. Infect. Diseases. 1904. I. 714.

Coombs, Miller, Kettle.—Histology of experimental rheumatism.
Lancet. 1912. II. 1209.

Crowe, W.—A contribution to the etiology of arthritis deformans.
Lancet. 1913. I. 1377.

Crowe, W.—The primary cause of rheumatoid arthritis.
The Lancet. 1914. II. 1460.

Crowe, W.—Treatment of arthritis deformans by vaccines.
Brit. Med. Journ. 1920. II. 815.

Davis, D. J.—The etiology and pathogenesis of rheumatoid arthritis.
Illinois Med. Journ. XXVI. No. 3. 158.

Davis, D. J.—Chronic streptococcal arthritis.
Journ. Amer. Med. Assn. 1913. 61. 724.

Dick, Geo. F.—Multiple arthritis due to a Friedlander Bacillus.
Journ. Infect. Diseases. Chicago. 1914. XIV. 176.

Ely, L.—Chronic arthritis.
Med. Record. CI. 223.

Faber, H. K.—Experimental arthritis in rabbits.
Journ. Exper. Med. 1915. XXII. 615.

Fayerweather, R.—Infectious arthritis: a bacteriological contribution to the differentiation of the "rheumaitc affections."
Amer. Journ. of Med. Sciences. Dec. 1905. 105.

Gay, F. P.—Recent aspects of streptococcal infection.
Journ. of Lab. and Clin. Med. 1918. III. 721.

Goadby.—The association of diseases of the mouth with rheumatoid arthritis and certain other forms of rheumatism.
Loncet. 1911. I. 639.

Greene, H.—Arthritis deformans: successful treatment by autobacterin.
N. Y. Med. Journ. 1912. XCVI. 421.

Henrici, A. T.—Specificity of streptococcus.
Journ. Infect. Diseases. 1916. XIX. 572.

Jackson, L.—Experimental streptococcal arthritis in rabbits.
Journ. Infect. Diseases. 1913. XII. 364.

Kinsella, R. A.—Bacteriological studies in sub-acute streptococcal endocarditis.
Arch. Intern. Med. 1917. XIX. 367.

Loeb.—The bacteriology of acute rheumatism.
Arch. Intern. Med. 1908. II. 266.

Moon and Edwards.—Results of blood cultures in rheumatoid arthritis.
Journ. of Infect. Diseases. 1917. XXI. 154.

Moore, J. J.—The action of vaccine and of concentrated anti-streptococcus serum in experimental streptococcal arthritis.
Journ. Infect. Diseases. 1914. XV. 215.

Mutch, N.—Alimentary infections in chronic arthritis.
Lancet. 1912. II. 1266.

Nathan, P.—Arthritis deformans as an infectious disease.
Journ. of Med. Research, 1917. XXXVI. 197.

Painter, C.—Experience with opsonins and bacterial vaccines in the treatment of tubercular and non-tubercular arthritis.
Boston Med. and Surg. Journ. CLVII. 621. (1907).

Poynton and Paine.—Etiology and rheumatic fever.
Lancet. 4900. 861.

Rosenow.—Etiology of articular and muscular rheumatism.
Journ. Amer. Med. Assn. 1913. LX. 1223.

Rosenow, E. C.—Studies in endocarditis and rheumatism.
Journal-Lancet. Minneapolis. 1914. XXXIV. 1.

Rosenow, E. C.—Lesions produced by various streptococci: endocarditis, rheumatism.
New York Med. Journ. 1914. XCIX. 270.

Rosenow, E. C.—Etiology of acute rheumatism, articular and muscular.
Journ. Infect. Diseases. 1914. XIV. 61.

Rosenow, E. C.—Etiology of Arthritis Deformans. Preliminary note.

Rosenow, E. C.—Relation of and the lesion produced by various forms of streptococci, with special reference to arthritis.
Illinois Med. Journ. Chicago. 1914. XXV. 11.

Rosenow, E. C.—Relation of focal infection to the bacteriology of arthritis.
Lancet.-Clinic. Cincinnati. 1915. 113. 32.

Rosenow, E. C.—Local infection due to intravascular dissemination of bacteria.
Surg. Gyn. and Obs. Chicago. 1915. XX. 403.

Rosenow, E. C.—Elective localisation of streptococci, following intravenous injection, with special reference to appendicitis, cholecystitis, rheumatoid arthritis and erythema nodosum.
Med. Record. 1915. 87. 959.

Rosenow, E. C.—Elective localisation of streptococci.
Journ. Amer. Med. Assn. 1915. LXV. 1687.

Rosenow, E. C.—Etiology and experimental production of erythema nodosum.
Journ. of Infect. Diseases. 1916. XVI. 367.

Rosenow, E. C.—Results of experimental studies on focal infection and elective localisation.
Med. Clinics of North America. Phila. 1912-22. V. 573.

Rosenow, E. C.—Elective localisation of streptococci, as a factor in the production of disease.
Annales Clin. Med. Balto. 1922-23. I. 211.

Rothschild, W., and Thalhimer.—Arthritis produced by Streptococcus Mitis.
Journ. Experim. Med. 1914. XIX. 444.

Schloss and Foster.—Experimental streptococcal arthritis in monkeys.
Journ. Med. Research. 1913. XIXX. 9.

Schueller, M.—Relations of chronic villous polyarthritis to the dumb;bell shaped bacilli.
Amer. Journ. of Med. Science. Aug. 19606. 231.

Soltau.—The use of vaccine in the treatment of rheumatoid arthritis.
Lancet. 1913. I. 1379.

Swift and Kinsella.—Bacteriological study of acute rheumatic fever.
Arch. Intern. Med. 1917. XIX. 381.

Torrey, John C.—Bacteria associated with certain types of abnormal lymph glands.
Journ. of Med. Research. 1916. XXXIV. (n. s. 29). 65.

Vipond.—Recent work on the bacteriology of rheumatic arthritis and its treatment.
Amer. Medicine. 1915. XXI. 894.

Walker, E.—On the micro-organism isolated from acute rheumatism and its relation to other members of the streptococcus group.
Brit. Med. Journ. May, 1907. 1233.

LEARNING THERAPEUTICS*

W. R. HOUSTON, M. D.

Augusta

Some twenty years ago, at a Savannah meeting of this association, there was read a paper in which the topic discussed was the Decay of Prescription Writing. The topic aroused such deep general interest that, to the neglect of the rest of the program, almost a whole morning was given to the discussion of prescription writing. The medical schools were roundly denounced for their failure to teach prescription writing. Horrible examples were cited of the lamentable ignorance of the younger generation. The note of alarm sounded shrilly and the call to repentance rang out with apostolic fervor.

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

Since that time a good bit of water has run under the bridges. Scarcely anyone would nowadays be found to break a lance in behalf of the art of prescription writing, an art which is dying its natural and little to be lamented death. It is my belief, however, that the spirit which underlay that discussion is still alive. It is a spirit of protest—protest against the step-motherly attitude of medical leadership toward therapeutic problems. I should like to see this spirit of protest effectively mobilized.

To the ears of the laymen nothing could sound more oddly unreal than that medical men should fail to find the question of curing the sick the one question of paramount interest. It would require much patient initiation and guidance to make him see how doctors ever got that way. The educated man is, of course, aware that in institutions of learning there is always to be found a strong and constant current setting toward pedantry and sterile scholasticism. He must feel, though, that in a medical school where students and teacher are brought into direct contact with the sick men, there could be no question but that the welfare of the sick man should be always in the center of the picture. Yet it isn't. I feel that I may say this as one who has sinned as grievously as any against the common sense of the situation. When one walks the wards with a group of students, as I have done for some twenty years, he seems to be under some compelling curse to spend the entire hour in discussing points of diagnosis, pathology, in dwelling on the clinical examination, on the laboratory and roentgenological aspects of the case. Even if one set out with all intention of giving full weight to the therapeutic problem, before he is aware, he finds he has drifted into the fields of experimental pharmacology or pathological physiology and the time is gone. A nicely-balanced weighing of all the possibilities of differential diagnosis will eat up time till all the attention that the teacher can give to treatment is little more than a grunt and a shrug. The student has been trained to look on all this as quite in order. He spent two years in analytical studies without having seen a sick man. The same critical and mechanistic attitude that he has been grounded in follows him to the bedside.

When such a student comes to graduate, he knows, as a rule, precious little of what the good doctor should know of the art of therapeutics. He knows there is such a thing as a typhoid routine, but he would be embarrassed if called on to institute it in a home without the aid of a trained nurse. He has heard that there are circumstances in which a low protein diet is desirable, but he could scarcely write a dietary containing forty grams of protein per day. He could prescribe satisfactorily, perhaps, for heart failure, because cases of that type have been his daily bread on the wards, but he would be graveled indeed as to what to do for a patient that had a gastro-intestinal neurosis.

When he has become an interne he begins to sense the need for some definite knowledge of therapeutic procedure. He turns a more attentive ear to the scraps of gossip afloat in internes' quarters as to such and such a technique. His interest, however, still centers on differential diagnosis. He is still persuaded that if the correct label is put on the case anyone can be trusted as to the treatment. He is scarcely aware as yet that many so-called diagnosis are merely labels, useful chiefly for the filing clerk and that a true diagnosis includes a knowledge of the patient's personality, his biography, his character, his setting in home and society. It hasn't, perhaps, occurred to him that the patient's reactivity to certain drugs, as digitalis or alcohol, constitute a most essential part of the diagnosis. The interne, while he is undoubtedly picking up some odds and ends of therapeutics, is still constantly made to feel that it is only through diagnostic failures that he will lose face. He can get by with the grossest lapses and neglects in therapeutics without comment, but should he fail to distinguish measles from mumps none will be found to soften his chagrin with the reflection that it didn't really matter a hang whether he distinguished them or not. He dwells in an atmosphere where one acquires merit and lays up treasure by making the lucky guess—when sounder reasoning would decline to make a diagnosis at all for lack

of adequate data; in an atmosphere where all the talk is about the interesting case that just came in—meaning quite generally, a hopeless case, one barren of therapeutic opportunity. In this term "interesting case" with the all too well known gloom of its connotations lies the key to much of the therapeutic ineptitude of the young practitioner. He has been busily 'tithing his mint, anise and cummin' to the interesting cases, while the weightier matters of the care and cure of the sick, went unheeded.

Emerged into practice, the young doctor, just so far as he is gifted with the power of self criticism, becomes acutely aware of his deficiencies. The young doctor finds himself at once in a new world, very unlike the world of the hospital wards. Here he can still carry on well enough in such matters as obstetrics or petty surgery in which he has had actual therapeutic training. When it comes to medicine he finds himself looking back regretfully to the days when trained nurses stood at his elbow. Their training had been a training in therapeutics. While he was gathering the husks, they were absorbing the meat of actual therapeutic practice. Though it is true that latterly some effort is being made to stuff more chaff into their pabulum, in the main they were getting better acquainted than he with the details of therapeutic art—an acquaintance for which his vague speculation about principles formed but a puny substitute. Supposing that this young man is a youth of indifferent fibre, he will begin to cast kindly glances at the blotters on his desk and to scan the generous suggestions of manufacturer's, gay advertising sheets with a favorable eye. Behind the prescription counter at the drug store he will hear the old doctor talk. The old doctor discourses with a vehemence of conviction about his faith in this or that medicament—a faith cocksure and assertive, in direct proportion to the slenderness of its foundation. How warm and heartening all this sounds in comparison with the pallid and tentative suggestions of the teachers in the schools.

The old doctor is *interested* in therapeutics. The diploma-mill from which he came, if it failed to give him critical judgment at least didn't curdle his humanity. The young doctor hearing him talk is impressed with the notion that the further one recedes from the temples of science the warmer grows the interest in therapeutics—with the patient, at the receiving end, uninterested in anything else.

But let us waste no time in regrets for the man who lazily accepts as his therapeutic guides the gossip of the prescription counter and the leaflets of the drug house. Let us turn to consider the problem of learning therapeutics as it must present itself to an alert and questioning mind.

What is the reason that therapeutics received in his training such scant attention? Certainly not because it is an unworthy subject of consideration. It is too obviously the goal of all medical efforts. The history of modern medicine discloses one reason. The rise of the Virchow school of organ pathology was followed by a wave of profound therapeutic pessimism. It was a period of destructive criticism of the older notions of disease. It was said that there were no diseases, there were only diseased organs. It followed that the polypharmacy of the previous generation fell into contempt. There came about a wholesale sweeping away of therapeutic rubbish and amid the general muck-raking there was little ardor left for constructive therapeutic effort. It was the period when it used to be said in the halls of the Charite in Berlin that a sick man should consider himself fortunate if he had con Leyden to make his diagnosis and Virchow to perform his autopsy. In that era therapeutics came to be looked on as a task for puttering old grannies. In time the epoch-making researches of the Virchow School lost much of their glamour through the rise, first of bacteriology, after that of serology and endocrinology and still more recently in the swing towards the study of constitution and the biology of the individual, but in many quarters that old absorption with the diseased organ as the medical center of gravity still pops up its head.

A second reason is to be found in the pedagogic difficulties of teaching therapeutics. The "interesting case" so-called with all its

physical signs and laboratory findings is easy to demonstrate. Its demonstration is scientific, in so far as the data can be measured and counted and statistically compared with similar findings. Therapeutics on the other hand is still an art. If we attempt to estimate what proportion of our daily therapeutic practice has been subjected to the test of close statistical scrutiny we would be surprised at the result. How much of it depends on hunches or hopes? How much is merely the fashion of the day which tomorrow will pass? If some one were to assert that the phlebotomy of our grandfathers was as well grounded a practice as the tooth-pulling of today could we prove the contrary? We have accumulated some data in therapeutics that are unassailable, but a large part of what we do is founded only on vague impressions. It is all this that makes the teacher loathe to be dogmatic on therapeutic questions—and teaching that is not dogmatic is hard to come by. The true teaching of therapeutics will be inspirational. It will make the therapeutic problem the interesting problem, the question of cure the hot spot in every clinical inquiry.

This alert and questioning young doctor, then having analyzed his lack of therapeutic guidance and found it to be traceable to trends that took their origins in an obsolescent period and to the inadequacies of the pedagogue not to say the pedant—will next ask the momentous question, how to turn to account his four years of training so that some usable skill in the therapeutic art may yet emerge.

Why not take the whole structure to pieces and without breaking any piece rearrange the pieces from a therapeutic viewpoint? The prospective will no doubt be greatly changed. What loomed large will look little and many once minor matters will occupy a large place in the foreground, but he is bent on becoming therapeutically minded and what matters?

First, he will regroup all the diseases listed in his practice of medicine, classing them not according to etiology and organ pathology, as he finds it done, but according to the therapeutic method to be employed. The first disease taken up is typhoid fever. The treatment, in a word, is nursing care. Nursing care includes the hygienic management of the sick man, of his vegetative functions and his comfort. Most of what is known about nursing care is illustrated in the management of typhoid, an elaborate therapeutic art understood by well-trained nurses, but very dim in mind. He begins to realize what a huge debt is due those pioneers that organized the nursing profession, what a magnificent therapeutic advance was made there. He will feel constrained to review from the therapeutic point of view the pathological physiology of fever, the desirability of reducing it, the effects of water. He sees he must have at his finger tips the qualities of the foods given, their savor, their mechanical consistency, their caloric values. He will realize that when he has mastered the art of nursing care he will have mastered what is now known of treating the larger part of all acute infections. He will realize that a considerable part of his duty as a physician will be to become an instructor in the art of nursing care in homes where no trained nurse is at hand to make his task easy. He will welcome the district nurse who shares this work and as an honest man he will not write some useless prescriptions as a gesture of professional superiority, but will lend the weight of his authority to emphasizing and reinforcing the lessons of the nurse.

But is nursing care all that can be done for this large group of diseases, the typhoid group? Undoubtedly there will be certain aspects of the nursing care that will require greater emphasis in certain diseases. There will be need for the utmost in tact and management to adjust the demands of the nursing art to the unusual individual. There will be need of vigilance for detecting complications that require the surgeon's care. But what shall be thought of the use of some specific remedy? It is only recently that the case for treating typhoid by nursing care has been allowed to rest at that. In many hospitals as though to place a wreath on the expiring hope of a specific remedy urotropin is still given to typhoid patients. The search for specifics is unceasing and properly so. Sydenham was so heartened by the discovery of quinine

therapy that he expressed the belief that there lay concealed in nature a specific for every ill. What shall be the attitude of our learner toward the specific that was proposed yesterday and will surely be proposed tomorrow? Nothing could be more helpful to him than to read the more recent literature of therapeutic proposals. Let him look up the years from 1905-15, for example. To illustrate, he will find there depicted the rise of the silver salts to popular favor. In Huchard and Fissinger's admirable book, "Therapeutics With Twenty Drugs," the author lists as one of the twenty indispensable drugs, ranking with quinine, iodine, opium and the rest, coloidal silver to be employed in cases of typhoid, pneumonia, septicemia, etc. Who uses colloidal silver now, and who will use its successors ten years from now? Undying hope will drive us forward always to seek new specifics and wishful thinking will lead us to believe we have found them. The trained mind—and our learner while he may have been taught very little theapeutics, will here begin to gather dividends from his mental training—the well-trained student will hear of the new method with sympathy, but will know better than to give too full credence to the first report. He will at least wait until confirmations have come from several and highly respected sources. Above all he will not attempt to experiment and rely on his own observations. He will realize that a man in practice has too few cases to be able to draw conclusions—that he (and unfortunately many far more experienced than he) has a too limited acquaintance with the natural history of disease to be able to distinguish natural deviations from those due to any given procedure. Suppose that the use of colloidal silver would reduce typhoid mortality by three per cent. What hope for the general practitioner to discover that fact in a life-time of practice? His training will make it clear that he is not in a position to undertake statistical therapeutic studies and in this group of diseases opinions based on a few observations are subject to tremendous error. He will realize that reliable sudies of these questions must perforce be made where great numbers of patients are gathered and that he will be wise to follow the leadership of those who have had the opportunity to carry out such statistical studies. He will know that he has no right to form an opinion of his own. He will be exceptionally fortunate if he ever achieves the right to his own opinion on one or perhaps two therapeutic problems. His position must be in the main that of a middleman, distributing directly to individuals the best results of wisely planned and widely controlled therapeutic experiments. The direction of nursing care, taken broadly, is an art elaborate and subtle enough to enlist his highest talents. If he masters this art he will gain in confidence. He will be able to stand firm in the position that a knowledge of the limitations of formed drug therapy in the typhoid group of diseases need not be frowned on as therapeutic nihilism.

A second group in the therapeutic classification of diseaes would be formed of those diseases for which there exists a definite specific—the malaria group, we may name it. The specifics are drugs or serums or organ products. Quick diagnosis in this group is of paramount value. It won't perhaps count much as to influencing the course of the disease whether influenza is mistaken for epidemic encephalitis. Whether malaria is mistaken for encephalitis may mean life or death. In this group while we can't afford to neglect the patient's constitution and idiosyncrasies, our main attack is made on the disease itself. It is here that there is observed most clearly the place and value of standardization in treatment. Lack of standardization is the greatest cause of therapeutic miscarriages in this group. The well-trained student will see at once that a heavy responsibility lies on him to familiarize himself with the standard methods and to execute them. A recent textbook on medicine after discussing the action of mercury, bismuth, and arsphenamine in syphilis says, "The method and routine by which these various antiluetic agents are administered is determined by the bias of the physician"—This statement records an existing condition, but one —greatly to be deplored.

How can the practitioner know the effective use of these drugs? It can be known

only through long and carefully controlled statistical studies. It is in the great clinics that the techniques for the management, especially of early syphilis, must be worked out. The value of system and method in managing these cases far outweighs the value of individualization. We have been reminded so often that treatment must be individualized that we have greatly neglected the need of standardization. It would be best for the occasional syphilitic therapeutist to follow the system devised by those in the advisory centers even though unable entirely to rationalize them. New drugs are being introduced. Let him wait till a consensus of the best syphilographers has determined their place before accepting the verdict of the first speaker.

Of other therapeutic groupings that will suggest themselves I may mention the group in which a limitation of the daily life of the patient is the chief therapeutic consideration, the compensated heart case, or the nephritic, or the elderly diabetic, for instance. Skill will be needed to maintain the limitations in such a way as later to be able to broaden them. Much moral support and guidance will be needed to uphold the observance of the limitation.

A yet more complex group is that in which the treatment leans chiefly on considerations of pathological physiology. An example is the irritable stomach, hypermotile, hypertonics, hyperacid. There is no group in which a thorough grasp of all the lessons of the earlier medical years in physiology will help so much.

The last group to which I shall refer is that in which psychotherapy and general personal hygiene constitute the important therapeutic methods. A large clinic recently estimated that forty per cent of the ambulatory patients seeking relief fell into this group. What chance did our young doctor have of learning how to deal with this class of patients? I asked a resident physician in the hospital if he had any cases of functional neurosis that I might study for my therapeutic clinic. He said such didn't often get into the hospital, but if they caught one they mighty soon run him out. The student hears something of the Freudian method and is usually keenly interested, but Freud himself says that it is only the exceptional case to which his method is applicable and assuredly it is the still more exceptional man that can apply it. The Freudian techniques, to say the least, are valueless in the daily work of the medical man. The young doctor is usually wholly at a loss as to how to deal with this class of patients. He will have to learn and study much before he passes beyond the stage of bromide and strychnine therapy. If he reads attentively the writings of Janet, DuBois, Weir Mitchell and, above all, if he develops a lively interest in the individuals of this group that present themselves, he will soon begin to learn. He will see at a glance that the growth of the cults is due to successes achieved chiefly with this group of patients. The millions that betake themselves to the osteopath, the chiropractor, and the faith cures constitute a commentary on the feebleness and inadequacy of our therapeutics in this field.

I should like to say in closing that for all this criticism I do not fail to recognize that medical therapeutics is making progress. A groping and uncertain progress, but still progress. The surgeon some time back was honored by the public because he was engaged in active therapeutics. The medical man is coming to take a place abreast of him because he is learning better therapeutics.

Passing by the primary problem of preventing disease, there are three main lines of emphasis in our attitude toward disease. We may emphasize getting money out of disease, diagnosing disease, or curing disease. We may look on all health chiefly as a vested interest on which we should realize, or chiefly as a parade ground on which to display our scholastic pedantry, or we may look on disease as that which it is our life work to alleviate and heal.

DISCUSSION ON DR. HOUSTON'S PAPER

Dr. A. A. Barge, Newnan: As our professor in medicine used to say, we never will learn all there is to know about opium, and advised the class to look up opium and other drugs if we had used them a hundred times. If in doubt as to indications and contraindi-

cations of any drug in a given case, my custom is to consult from one to seven authors and then use my judgment in the case.

The essayist advised following those of vast experience and I agree with him that he is at least partially right, but not altogether right. Take the well-known French author, Martinet, on the use of calomel, and he is wrong when he says never give calomel on an empty stomach. For more than twenty years I have been giving calomel on an empty stomach and will not give it any other way unless extreme conditions force me to do so. From 1891 to about 1900 I gave calomel in what was called broken doses grs. 1/20 to grs. 1/6 every 20 or 30 minutes till a certain number were taken, when a dose of oil was to follow; a liquid diet was allowed and you may rest assured my patients were sick in every instance from the calomel and food. My dose for last twenty years is 1 grain for every year of patient's age up to 18 years, then 20 grains for adults, always given on empty stomach the patient is directed to place the calomel on tongue and wash it down with a large glassful water in which has been dissolved a level teaspoonful of bicarbonate of soda, follow in four hours with castor oil and soda or epsom salts and soda dissolved together, if indican shows decided give Pluto water to clean the small intestines. If given at bedtime follow next morning as above. Never give food of any kind until the oil or purgative has acted well, and then very little and very light for several hours.

Dr. J. F. Schneider, Atlanta: I have not been in practice a long time, but as my experience grows, my conviction deepens that the tendency of every disease is towards recovery, and nature is only defeated in her struggle when the odds are against her. If we would study more the predisposing causes of disease and practice preventive medicine our problems of therapeutics would be simplified a great deal. When I studied chemistry, our teachers stressed the fact that there is no transmutation of elements, and also showed what elements are constituents of our bodies. In the treatment of disease today many give mercury, arsenic, strychnine, and other organic and inorganic compounds which are not only foreign to the body, but also highly toxic, in the belief that the body may appropriate them somehow in the repair of its tissues. When the proper "raw materials" are supplied to the body nature will always prove that it operates its own best laboratory.

I enjoyed Dr. Houston's paper very much, especially his philosophy.

The gentleman preceding me in the discussion mentioned calomel. I will tell you why calomel is prescribed, not for what the calomel does to the intestinal tract, but for what the calomel causes the bowels to do to it. The body makes such a desperate effort to rid itself of that violent irritant, that it also sweeps everything else along with it.

Dr. W. R. Houston, Augusta, (closing): When I came back to work in Georgia, after being away for five years, I found the chair of therapeutics was vacant. I thought if I tried to crowd into my old place I might crowd someone else out, so I asked if I might be allowed to teach there. I was told to go ahead, but that "we think so well of you that we would like to see you step up higher." I would like to know how much higher there is to go than to try to do something with therapeutics? I tried to relieve one of the difficulties of our students by making them take the nursing course. I made them learn everything the nurses do, and had the head nurse teach them all the things they go through.

As regards the attitude of mind of the man in learning therapeutics, I think one group is particularly worthy of attention; namely, the group for which specific remedies exist. It is not a large group, perhaps nine or ten diseases, that we have in this part of the country for which there exists a definite specific. Those are the ones that must be diagnosed promptly and surely. It does not make so much difference whether a person can differentiate an encephalitis from a tuberculous meningitis, let us say, but it makes a great deal of difference whether he can recognize cerebral syphilis, and whether he can recognize malaria in a given case. Having made his diagnosis, I think it is best for him not to rely on his own wits. One of our best authorities, after discussing all of the remedies in syphilis, says that the use of these drugs may be left to the bias of the individual physician. To my mind, that is all wrong. He should study the methods that have been employed in the large clinics, where many cases have been treated. He cannnot with his limited experience test out the long list of drugs that have been introduced. His best plan is to stick to the plan of the best clinic.

The treatment of malaria can be stated in a few words. The tendency of the man is to be individual. He wishes to feel that he is doing something more for his patient than the others do. He wants to give his wealthy patient something different than the nigger

(Continued on Page 428)

CLINICS FOR CHILDREN OF THE PRE-SCHOOL AGE IN ATLANTA*

LEWIS D. HOPPE, M.D.
Atlanta

Experience in the public schools of several large cities has shown that a large proportion of the children entering these institutions show some form of physical impairment, many of which amount to gross deformities and all of which limit the learning capacity of the child.

Statistics have shown that there are more failures in the first grade than in all other grades combined. When a search is made for the cause of these failures, it is often found that various minor physical defects have undermined the health of the child and are thus the indirect cause of these failures.

With these facts in mind, Dr. J. P. Kennedy, Health Officer for the City of Atlanta, established sixteen pre-school clinics in that city eight years ago. Since the summer of 1923, I have personally conducted these clinics for him.

The clinics are located in various parts of the city and are attended by the children of the well-to-do as well as by the poor. Mothers are advised not to bring acutely ill children to the clinics. When the child enters the clinic he is weighed and measured and his history taken by one of the staff of city nurses. If it happens to be his first visit he has a physical examination. If it is his second or third visit and he has progressed satisfactory, his mother is informed of his progress and he is sent home with instructions to return at the next meeting of the clinic. If his progress has not been good he is examined again. No child is examined unless the parent or guardian is present.

If the financial status of the family is such that they can afford a physician, the mother is simply told what defect the child has and is advised to take him to her physician for treatment. If they cannot afford to have a doctor they are given advice, diet lists and the necessary prescriptions. The age limit for children attending the clinics is from one day up to four years. No contagious diseases are admitted.

During my period of service, since 1923, I have personally examined 4,700 different children, and I will now endeavor to present a resume of my findings in this group. It must be remembered that the children entering these clinics were not supposed to have any acute illness. In order to avoid confusion I will discuss those findings recorded on the first visit of the child to the clinic and the subsequent progress made by the child. Of these 4,700 children 2,773, or 59 per cent, were infants under one year of age. This fact is interesting because it shows that we are given opportunity to prevent as well as correct a large number of defects that are found in the child of the pre-school age.

In the entire group of children 46 per cent were found to present some defect. This figure is rather high when we recall that 59 per cent of the children were under one year of age. Thirty-eight per cent of the entire group showed defects of nutrition. Under-nutrition (20 per cent or more undernourished) leads the list with 1,598 cases, or 34 per cent. Rickets ranked second with 987 cases.

In reviewing these cases of undernutrition several interesting facts present themselves.

1. Undernutrition in infants under six months of age was rare.

2. Almost without exception the undernourished infant over six months of age was found to belong to the families of the poorer classes.

3. Almost 90 per cent of the mothers of these infants nursed their babies during the first six months of life. This percentage was not nearly so high in the mothers of the well-to-do.

At first glance one might be led to doubt the value of breast feeding. Such is not the case. The mother of the family of the poor nurses her baby six months, during which time he thrives and usually outgrows his well-to-do brother. At about six months he is weaned because his mother has to go to work or has become pregnant, or both. He is fed some proprietary food with a little of everything that is served at the family table.

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

Frequent gastrointestinal upsets result in undernutrition. Rickets also play a prominent part. Many of these babies are placed in day nurseries while the mother is at work. Hundreds of these babies are fed on formulae supplied by the clinics. It is here that the greatest actual service is done by the clinics, especially in the summer months when diarrhea is prevalent.

The other group of undernutrition, that is in children from one to four years, belongs chiefly to the families of the well-to-do. The habit of eating between meals or of forced feedings is responsible for a good number of this group. Organic disease was found to play a minor part in this class. It is probable that overindulgence in the rich causes some of this undernutrition and lack of indulgence prevents some of it in the poor. When undernutrition was present in the latter it was most always due to some organic disease.

Chronic infections of the tonsils and adenoids was the cause of 13 per cent of the defects.

Thus far I have mentioned only three classes of defects, that is, defects of nutrition, rickets and diseases of the tonsils and adenoids. The reason for this is that these three causes make up almost eighty per cent of all of the defects found in this group of children. Such things as diseases of the heart, lungs, skin, nervous system, etc., are rare when compared to the first three groups.

This point should be of importance to those interested in public welfare and certainly should have some bearing on us all. Most diseases of nutrition are preventable. Rickets is certainly preventable. Therefore, the public should be educated more along these lines, because if these two causes for defects in the pre-school child were reduced or removed a large proportion of the pathological conditions found in the younger generation might be prevented.

I will not take up a detailed discussion of all of the various groups. They are outlined in the accompanying table. Attention should be called, however, to the wide variety of conditions met with. In spite of the fact that the mothers are continually urged not to bring acutely ill children to the clinics, acute infectious diseases occasionally come in. We have even come upon cases of smallpox and one case of rabies was seen.

Let us now turn to the efforts made to correct the defects found in these pre-school children. As stated previously, a large number are treated by the child's own physician. Others are cared for in the clinics themselves and still others are treated at the various hospitals and Out Patient Departments through the city. With the cooperation of the Parent-Teachers' Association and other organizations, the parents are continually urged to take the necessary steps toward correction of the defects. Of the 4,700 children examined 2,162 showed one or more defects, and of these, 1,362 children, or 63 per cent of the defects have been corrected. Besides this hundreds of the mothers have been given feeding directions for infants and children. A great many other diseases or defects have been corrected through educational work among the parents and the return visits of many of these children to the clinics after the first trouble has been removed. By making these corrections and by conducting this educational work we believe that we are not only relieving much sickness but that we are also correcting many developmental defects and thus saving much loss of time from school.

Type of Defect	No. of Cases	Percent of 4,700	No. Cor.	Per cent
Nutrition	1598	32%	1060	64%
Rickets	987	21%	780	79%
Tonsils and Adenoids	611	13%	403	66%
Circulatory System	21	0.45%	5	24%
Respiratory System	63	1.03%	42	67%
Gastrointestinal System	111	2.3%	86	78%
Nervous System	5	0.1%	2	40%
Teeth	220	4.6%	186	83%
Ears	43	0.9%	31	69%
Eyes	21	0.4%	17	81%
Skin	187	3.9%	150	80%
Genitourinary System	39	0.8%	28	74%
Bones	4	0.08%	1	25%
Lymph Glands	181	3.9%	112	62%
Congenital Malformations	12	0.3%	0	0
Acute Infectious Diseases	87	1.8%	Not Treated	

DISCUSSION ON PAPER OF DR. HOPPE

Dr. W. L. Funkhouser, Atlanta: Dr. Hoppe has given us the advantage of five years' hard work, for which I am sure we are very grateful. The health centers, operating as they do with the pre-school child, give us our best opportunity to develop preventive medicine. I did school inspection

years ago, when it was in its infancy, and was surprised to find the large number of children entering school with preventable defects.

One of the greatest problems of the school child today is undernutrition. This, as Dr. Hoppe showed, is not present at birth, but during the pre-school age children become either potentially or actually undernourished children. Emerson gave as causes for this: Lack of home control, poor health habits, poor food habits, and physical defects, all of which can be prevented or certainly corrected during the pre-school age.

One important service of the pre-school age is education. If we could get to the parents and have them appreciate the value of prevention, we could then not only render a definite service to the child himself, but there would be a certain amount of missionary work done in his neighborhood, which would be of great assistance to all children.

I am very anxious to see mental hygiene, or habit formation training, incorporated in the pre-school clinics, so that these children can be guarded from malnutrition and other ailments. The three great factors could thus be controlled—lack of home control, poor food habits, and poor health habits. If these habits could be developed properly in the young children and carried on, around them could be built other serviceable habits, such as those of sleep, play, work, study, truthfulness, and many other traits which we admire. Then, as the child grew older, he would be in better position than he is today to meet life's conflicts and problems. It seems to me just as important to teach mental hygiene as to teach physical hygiene; and if this could be accomplished, we could develop individuals better fitted to meet the problems of living that confront us today.

Dr. S. C. Redd, Atlanta: In line with Dr. Hoppe's care of children up to the age of four, I wish he would stress the point of the doctors, particularly in the rural districts, taking careful histories of these cases of malnutrition, especially with regard to contact with tuberculosis. Recently we have studied the tuberculin reaction in 300 children under six years of age and a majority of those ran positive every reading, where we thought they would run negative. Economic conditions play a greater part in these children than tuberculosis. Please be impressed and impress the mothers with the importance of taking note especially of the cards the children bring from school which designate their defects. Frequently mothers call up and ask if an infected tooth could not wait until fall, or something like that. My advice always is to have the defect corrected immediately. It is so easy to lay these cards aside and pay no attention to them, so please, all of you, impress upon your patients the importance of these things, and make them understand that these doctors are doing sincere and beneficial work.

Dr. Thos. Bolling Gay, Atlanta: Dr. Kennedy is to be congratulated upon having established these clinics and Dr. Hoppe upon having made them a success. The set-up for health centers in Atlanta seems to rest on firm foundations and there seems no reason why they should not grow with the growing population.

Plans for carrying on health centers vary in the different localities according to the organization which first becomes interested. In most cities they are operated and financed by private organizations as milk funds, infant welfare associations and the like. Boston is operating hers through the City Health Organization, the pediatricians being chosen by the Medical School Staffs. The only advantage in operation through private organizations is that it allows more latitude for special studies.

In Minneapolis special work has been done along mental hygiene lines. Dr. Huenekens has been convinced from data obtained there that the character and emotional patterns of a child are formed at the age of six years and stresses the importance of mental hygiene work in health centers. It might be well to consider this in Atlanta.

I have been especially interested in Dr. Hoppe's report of his findings, as I spent all of my time in work of the sort for four years before setting down to practice. Our findings agree in all the main features Dr. Hoppe has stressed.

Dr. Lewis D. Hoppe, Atlanta, (closing): I wish to thank the gentlemen for their kind discussion. Dr. Funkhouser covered the subject very thoroughly and I have nothing to add to his points.

Dr. Redd asked concerning tuberculosis. We did not find much tuberculosis in children of that age, although that does not mean that it does not exist. Our examination at first is very superficial. We do not attempt to go into anything in much detail. If we find children in whom there is something definitely wrong they are urged to come back for further examination. Mental hygiene is certainly very important, and if we had more time to devote to these children we certainly would take it up.

PSYCHIATRIC STUDIES AMONG SCHOOL CHILDREN*

GEO. L. ECHOLS.† M.D.
Milledgeville

To what extent can mental disease be prevented? And how may we diagnose the pre-psychotic?

Future studies will more than likely demonstrate that this type of disease is just about as preventable as many others. We should not take either a stand of optimism or pessimism, but study the problem from a reasonable viewpoint.

The first thought concerning the prevention of mental disease is: Just when or where does it have its beginning?

1. Does it have its roots in heredity?
2. Does it rest on a constitutional basis?
3. Must some unhappy or unpleasant experience or situation arise in the individual's life to produce a pathologic predisposition?
4. Can we identify these individuals in whom a constitutional basis or a pathologic predisposition exists?
5. Is there a fairly wide margin of safety between the pathologic predisposition to mental disease and the actual mental break?
6. In case the pre-psychotic can be diagnosed, what can be done to prevent the psychosis?

With bad heredity we would naturally think of insanity, feeble-mindedness, crime, inexcusable poverty, alcoholism, etc., etc. Suppose we study a large group of descendants from such stock with a similar large group of good heredity. We would expect a much larger percentage of problems from the first group. Information in the past points in this direction; however, elaborate studies in Chicago during the last ten years indicate that the disturbing element among children —or the problem youths, come from three definite sources: foreigners, poverty and broken-up homes—the foreigners not understanding our ideas of freedom; the broken homes from death of one or both parents, or separation of parents, and from uncongenial home environment.

We must not be misled by mere statements, not based on careful studies—such statements as a family of genius followed by a mediocre generation, this in turn followed by a third of degenerates; or, Adam and Eve, just from the hands of the Divine Creator, fashioned after the image of God, produced a murderer in the first generation. We would expect bad heredity to produce in turn bad offspring, and for this reason sterilization propaganda is not uncommon; laws to this effect, judiciously carried out, may prove of some help.

Personal observation and studies lead the writer to believe that most psychosis rest on a definite constitutional basis—a something lacking in the psychologic make-up, perhaps lacking from birth, rendering the individual susceptible to mental disease. In addition to this it is found that many of these same individuals, during the course of life, drift into difficult situations, of varied types, which they are unable to handle adequately, this in turn producing a pathologic predisposition to mental outbreaks, sometimes long before the real mental break, in others not so long, or coincident with the mental break, or active psychosis.

We may be safe in concluding that many who are predisposed to mental disease never develop it, as illustrated by the stress and strain of armies in actual conflict, which show a sudden and sustained increase in the percentage of the psychotic. Many potential mental cases never develop an outbreak.

Certain psychoses are often preceded by a definite pre-psychotic reaction. However, it is not necessarily true that the pre-psychotic reaction will always be followed by an active psychosis.

Among the cases cited by Stecker and Ebaugh, 2nd edition, is found the following: A boy, aged 15, in the third year of high school, who formerly led his class, became a total school failure, showing pre-psychotic reactions of dementia praecox. He was examined in the psychiatric clinic, became apparently normal, and has remained so for several years.

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

†Assistant Physician, Georgia State Sanitarium, Milledgeville, Ga.

In the writer's personal studies pre-psychotic reactions have been observed, noted and followed up to, and through, the actual break; one such individual is at this time a patient in the Georgia State Sanitarium.

In doing psychiatric school work among problem children one will be impressed, from time to time, that a child has a predisposition toward mental disturbance. If it were only possible to take two similar large groups, studying one group from a preventive viewpoint, and the other group without interference, it would be most interesting to note the outcome.

We may be safe in concluding that there is a margin of safety between the predisposition and the actual break. This is seen between mental attacks in institutions. After recovery a patient is sent back to the old environment—to the old unpleasant situations, and another break follows: or, the individual may run into other and new difficult situations, resulting in another break. This is particularly true in the emotional insanities.

The writer believes that there is a *definite something* that produces each mental attack. The question is, to find that *something*. This leads us to the main thought of this paper: Why not find the trouble and remove it before the mental break?

In the work on mental disease in the past we have been attempting, at very great expense, to salvage the driftwood at the mouth of the stream. Why should we not be studying the young timber at the headwaters?

Among children, what is the meaning of tantrums, moody spells, jovial dispositions, seclusiveness, irritability, day-dreaming, evading duty, dishonesty, and many other undesirable traits or tendencies? If left alone, where will they drift? And if studied intelligently, how many can be improved or restored?

The state demands the right to educate the mind, and in turn the state assumes the responsibility for these same minds when later broken—by mental disease.

A small per cent of these children while in school develop into definite school problems of varied types, which hinder them from appropriating in a normal manner what the school system has to offer. In a previous paper on this subject I outlined a number of different types of problem school children, from my own studies, including physical defects, glandular imbalance, mental deficiency, bad environment, broken homes, criminal tendencies, sex delinquency, etc.

Today's *problem school children* will, in the main, become *tomorrow's problem adults*, in which the most important single factor is mental disease, or mental defect. Probably half of the inmates of our penal institutions are suffering from mental disease, or mental defect of some type. This to a great extent is more than likely true concerning our dependent classes, and wholly true among the insane.

Psychiatric studies among problem school children should be encouraged.

Owing to the scarcity of psychiatrists only a few cities could afford a psychiatric school clinic for the study of problem school children, but if the field is opened psychiatrists will be developed.

In our universities there might be a bringing together of the departments of sociology, psychology, education and the near-by public schools; the problem children of the latter being used for a psychiatric clinic—to the benefit of the child, resulting from the studies made; and to the students, our future school superintendents and teachers, giving them an insight into these psychiatric problems.

DISCUSSION ON PAPER OF DR. ECHOLS

Dr. H. D. Allen, Jr., Milledgeville: I certainly enjoyed hearing Dr. Echols read his paper, and it is very much after my own heart. I can add nothing, but want to commend it in the highest terms.

I divert from Dr. Echols a little bit on his leaning toward a purely constitutional factor that might be discovered and point toward a future frankly psychotic individual. If we consider that a gradation of the mentality of everyone is based upon an average normal, fixed according to the Binet-Simon method and the modifications of that, we will find that probably one-half of the entire population is mentally defective. Of course, this would be true in penal institutions and anywhere you are looking for purely mental defects. I think we might assume that everyone

is subject to mental trouble if there is sufficient accumulation of difficulties. As we go back and find these children in the pre-school clinics, we might find some difficulties that could be corrected by anyone who took a purely impersonal interest in the child as a human individual. Of course, where there is poverty and in the rural districts these things are easier to correct. The simpler the social state of the individual the simpler is the solution.

I am sure Dr. Echols is to be congratulated for pushing out into one of our smaller counties, and for sticking consecutively to his work for several years. He is a pioneer in his work in Georgia, and in this county has shown excellent results. He has been able to follow many cases until they had complete breaks, and to get them and study them later in our State institution.

Dr. N. M. Owensby, Atlanta: In the Hospital Number of The Journal of the American Medical Association under the date of March 30, 1929, on page 1048, it is stated that the average number of beds in the skin and cancer hospitals of the United States are 1,012, of which 64.3 per cent are occupied daily. There are 62,113 beds in tuberculosis hospitals of which an average of 80.3 per cent are occupied daily. There are 363,337 beds in general hospitals with only 66.0 per cent occupied daily. But in the hospitals for the insane of the United States there are 394,268 beds with 93.6 per cent occupied daily. No statistics were furnished of the feebleminded, epileptic, mental cases in general hospitals, jails, homes, nor those mental cases wandering around the country. Had these statistics been furnished, the number of mentally ill patients in the United States would have been given as over one million. These statistics may seem to be exaggerated, but you can verify them. To my mind the most astounding part about the above statistics is that a majority of those cases could have been prevented had they been treated in their incipient stages by a physician trained in mental diseases. However, they were not, nor does there seem to be any evidence that they will be referred to the psychiatrist in the near future, since each year the number of mentally ill are increasing at an enormous rate.

Mental diseases are due to many different causes, constitutional or otherwise. However, the seeds are largely sown during childhood and are fertilized by their environment and training. The family physician an d the pediatrician could help to eliminate a large number of mental ills had they been trained in their medical schools to combat these diseases. However, the medical school failed and they are no more capable of treating mental ills or preventing them than is the average layman. They are prone to say that the child will outgrow the symptoms of nervous or mental ills and let it go at that or else attempt to treat it without knowing how. As a matter of fact the neuro-psychiatrist should be consulted in all cases of nervousness, tantrums, moodiness, peculiarities of conduct or behavior, spells, etc., and then the number of mental maladies will decrease. This is equally correct for the child and the adult. I trust Dr. Echols' paper will help make the physicians realize the importance of psychiatric consultations and in this way reduce the perfectly appalling number of mental cases.

Dr. J. F. Schneider, Atlanta: The problem of psychoses in children should be attacked not only in the young, but also in the older individuals. We are living in a very fast age. Some time ago I received a life insurance application from the Pacific Mutual Life Insurance Company for disability insurance. They gave a long list of disabilities and their causes, and 16 per cent of them were due to nervous breakdown. The children of today are living in an atmosphere of high nervous tension. The little children growing up today know more about sex than our fathers did when they were adolescent. Sex consciousness is brought to the child very early today. What does the child of today play with? Our forefathers played out in the woods or with simple toys, but the children of today play with electric toys and mechanical toys which require concentration far beyond their years. When the child should be going to bed, probably the radio is going, and the child who should sleep ten or twelve hours is probably sleeping only six or eight in many instances. In many homes the food is highly stimulating instead of plain and nourishing. The problem lies as much with the adult as with the child, and it requires a program for their enlightenment as well as physical therapy and mental training for the children.

Dr. George L. Echols, Milledgeville (closing): I thank the gentlemen very much for their kind remarks. It has been my experience in studying school children that there is a small percentage who offer definite problems or varying types. It is my firm belief that the problem adult of tomorrow will in the main come from these problem children of today. A great deal of money is being spent on the problem adults of today in the way of

behavior difficulties, criminals, mental diseases, maladjustment, and so on. Our prisons are doing much in an effort to bring the inmates back to where they can go out and be citizens. If we are going to attack the problem why not do so at the very beginning, when there is much greater hope of accomplishing something. In other words, study the problem child while in school and accessible for such study. As an aid in further studies, constructive criticism and suggestions by personal letter to the writer is invited.

ABSTRACT OF THE PROCEEDINGS OF THE HOUSE OF DELEGATES AT THE PORTLAND SESSION OF THE AMERICAN MEDICAL ASSOCIATION JULY 8-12, 1929

The eightieth annual session of the American Medical Association was held in Portland, Oregon, July 8 to 12, 1929.

The House of Delegates convened at 10:00 A. M., July 8, and was called to order by the Speaker, Dr. F. C. Warnshuis, of Michigan.

The minutes of the seventy-ninth annual session were approved as printed. The annual addresses of the Speaker, the President and the President-elect were heard by the House and referred to the Reference Committee on Reports of Officers. These addresses appeared in The Journal of the American Medical Association for July 20, 1929. Reports of the Board of Trustees, of the Secretary, of councils and of other standing committees were submitted to the House and referred to reference committees.

That part of the report of the Board of Trustees dealing with the need for a new building to house the activities of the Association was referred to a special committee appointed by the Speaker on authorization of the House.

History of the American Medical Association

Dr. William Allen Pusey, delegate from Illinois, submitted a resolution providing for the appointment of a committee by the Board of Trustees to direct the preparation and publication of a comprehensive history of the Association. This resolution, having been referred to the Board of Trustees, was recommended for adoption and the recommendation was approved by the House of Delegates.

Practice by Corporations and Other Groups and the Relationship of Physicians Thereto

Dr. William Allen Pusey, delegate from Illinois, presented a resolution providing that the Judicial Council of the association be asked to present to the House of Delegates at the annual meeting in 1930 a comprehensive statement for the guidance of the American Medical Association concerning the practice of medicine by corporations, by clinics, by philanthropic organizations, by industrial organizations, by demonstrations and by similar organizations, and concerning the relationship of physicians thereto.

This resolution was considered by the House of Delegates in executive session. The resolution was adopted.

Home for Indigent Physicians

Dr. J. Norman Henry, of Pennsylvania, submitted the report of a special committee appointed to study the need for the establishment of a home for needy physicians. This report was referred to the Board of Trustees and was recommended for adoption. After discussion by several delegates, the recommendations of the Board of Trustees were approved, and the report of the committee adopted. The report of the committee advised against the establishment by the association of a home or homes for indigent physicians and expressed the opinion that "it is not, nor should it be, a function of the American Medical Association *at this time* to undertake the care of indigent physicians in any way."

Lists of Physicians in Classified Telephone Directories

Dr. G. Henry Mundt, delegate from Illinois, submitted a resolution providing that when publishers of classified telephone directories impose a charge for listing the names of ethical physicians in such directories, component county medical societies of the American Medical Association be advised to discontinue such listings in classified directories. The Reference Committee on Legislation and Public Relations, to which this resolution was referred, recommended the adoption of the

resolution, and the recommendation of the Reference Committee was approved by the House of Delegates.

Endorsement of the Methods of the Department of Commerce in the Selection of Medical Examiners

Dr. Albert Soiland, delegate from California, submitted a resolution providing that the American Medical Association should endorse "the medical work of the Department of Commerce, its methods of physical examination and its method of selection of medical examiners, and urge that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine." This resolution, referred to the Reference Committee on Hygiene and Public Health, was favorably reported and was adopted by the House of Delegates.

Dangers of Illuminating Gases and Gases Used in Electrical Refrigeration

Dr. J. W. Van Derslice, delegate from Illinois, submitted a resolution providing for the appointment by the Board of Trustees of a committee to study and report on the menaces to health and to life from carbon monoxide gas as a constituent of illuminating gas and as a by-product of the combustion of gasoline in automobiles: on the dangers of gases used in electrical refrigeration, and on steps necessary to be taken for the protection of the public. This resolution, referred to the Reference Committee on Hygiene and Public Health, was adopted by the House.

Teaching of Obstetrics

Dr. James R. Bloss, delegate from West Virginia, presented a resolution providing that the Council on Medical Education and Hospitals be asked to investigate the present teaching of obstetrics in the United States and to seek readjustment of the curriculum so that hours allotted to teaching of obstetrics be equal to those allotted to the teaching of surgery. The Reference Committee on Medical Education recommended the amendment of the resolution as presented by Dr. Bloss so that it would provide that the House of Delegates request the Council on Medical Education and Hospitals to investigate the present teaching of obstetrics "and make such recommendations for increasing the clinical teaching hours of obstetrics as the results of its investigations may warrant." On motion of Dr. Mundt, of Illinois, seconded by Dr. Morgan, of Massachusetts, the resolution was rereferred to the Reference Committee on Medical Education. At a later session this Reference Committee recommended the adoption of the following resolution:

> Whereas, The time allotted for the teaching of obstetrics in the curriculums of the several medical schools has been cut down and is inadequate to drill the student thoroughly in this important major, be it
>
> Resolved, That the House of Delegates request the Council on Medical Education to investigate the present teaching of obstetrics in this country and make such recommendations for increasing the clinical teaching hours of obstetrics as the results of its investigations may warrant.

The resolution as amended by the Reference Committee was adopted by the House of Delegates.

Amendments to By-Laws

Dr. E. C. Thrash, delegate from Georgia, proposed the following amendment to the By-Laws: Amend Chapter XIX of the By-Laws by substituting the words "two-thirds" for the words "three-fourths" so as to permit the amendment of the By-Laws of the Association by a two-thirds vote of the House of Delegates. On recommendation of the Reference Committee on Amendments to the Constitution and By-Laws, the proposed amendment was adopted.

Advertising Hospitals

Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology and Rhinology, presented a resolution providing that inasmuch as some hospitals, municipal and otherwise, have advertised in the daily press "and have given to the public stories of their special excellence and efficiency as compared with other hospitals," such advertisements be collected by the Council on Medical Education and Hospitals and that the "question of hospital advertising be given due consideration and reported to the House of Delegates at the next annual meeting and the rating of

hospitals be affected according to the unethical advertising published."

The Reference Committee on Medical Education, to which this resolution was referred, recommended the amendment of the resolution as introduced by Dr. Shurly so that it would read as follows:

> RESOLVED, That any physician observing such advertisements be requested to send them to the Council on Medical Education and Hospitals for its information and use in the rating of hospitals.

The resolution as amended was adopted.

Honorariums to Section Secretaries

Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology and Rhinology, submitted a resolution providing that the sum of $100 shall be paid to each section secretary in addition to the honorarium now paid "to cover the actual expenses involved in the preparation of the program and the presentation of the same at the annual meeting." The Board of Trustees, to which this resolution was referred, reported that no statement had come to the attention of the Board indicating that the honorarium now paid section secretaries is insufficient, and that the Board of Trustees stands ready to make necessary and proper adjustments. The report of the Board of Trustees was approved by the House of Delegates.

Supplement to The Journal

Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology and Rhinology, submitted a resolution providing that the Board of Trustees be authorized to prepare a supplement to The Journal, in which papers read before sections and not accepted for regular publication in The Journal should appear. This resolution was reported unfavorably by the Board of Trustees, to whom it had been referred, and the House of Delegates adopted the recommendation of the Board.

Digest on Physical Therapy

Dr. Joseph F. Smith, delegate from Wisconsin, presented a resolution providing that the Board of Trustees be requested to have prepared by the Council on Physical Therapy a digest setting forth the basic principles underlying the employment of physical agents and their mode of action on living tissue, and to publish this digest in a form which would be available to physicians. The Board of Trustees reported to the effect that a handbook of the kind provided for in the resolution is already in the course of preparation.

Expenses of Delegates

Dr. Frank Smithies, delegate from the Section on Gastro-Enterology and Proctology, submitted a resolution providing that the Board of Trustees be directed to defray expenditures of delegates for transportation, housing and maintenance during attendance on each annual session. This resolution was referred to the Board of Trustees, which recommended that the resolution be not adopted. This recommendation was approved by the House of Delegates.

Needs of Small Hospitals

Dr. T. O. Freeman, delegate from Illinois, submitted resolutions providing that the Council on Medical Education and Hospitals be ready to make a survey of the needs of smaller hospitals, to render all possible assistance to such institutions desirous of improving their system of records and their services to the public, and to offer its assistance to state registration departments to the end that such departments may secure such aid as they desire in connection with their classification of accredited hospitals. The Reference Committee on Medical Education, to which this resolution was referred, reported to the House of Delegates that in its opinion the investigation begun several years ago and now being carried on by the Council on Medical Education and Hospitals would fulfill all the objects of the resolution, and that the Reference Committee believed that the Council stands ready to give all possible assistance to small hospitals in solving their problems. The Reference Committee recommended that the resolution be not adopted, and this recommendation was approved by the House of Delegates.

Direction of Red Cross Nurses by Cultists

Dr. J. C. Litzenberg, delegate from Minnesota, submitted a resolution adopted by the Minnesota State Medical Association, disapproving the policy of the American Red Cross in officially authorizing Red Cross

nurses to nurse patients under the care of cultists. The Reference Committee on Legislation and Public Relations recommended that the American Medical Association disapprove any change in policy by the American Red Cross whereby the nurses of that organization would be available for service to patients under the care of cultists, and that the Secretary of the Association communicate with the proper officials of the American Red Cross and advise that organization of the attitude of the House of Delegates. The recommendations of the Reference Committee were adopted.

New Building

The special committee, to which that part of the report of the Board of Trustees dealing with the need for a new building for housing the activities of the Association was referred, expressed its conviction that it is desirable for the Association to have a building "that would be visible evidence of the dignity, importance and power of the Association," and recommended that it should be left to the Board of Trustees to perfect plans for providing the building.

This committee also expressed the opinion that the subscription price of The Journal is now relatively greatly below the price of other journals that approximate it in extent and quality, and suggested that the Board of Trustees should consider the question of increasing the subscription of The Journal.

A third recommendation of the committee was to the effect that it would be appropriate for the Board of Trustees, in a building program, to solicit memorial contributions, both large and small, from members of the association. The committee expressed its conviction that as the Association shows increased evidence of strength and permanence it will gradually become the recipient of an increasing number of memorial contributions.

The report of the special committee was adopted by the House of Delegates.

Later in the proceedings, Dr. William Allen Pusey, delegate from Illinois, introduced a proposed amendment to the By-Laws providing that the subscription price of The Journal shall not exceed $8.00. This proposed amendment was adopted by the House, and the Board of Trustees is thereby authorized to increase the subscription price of The Journal to a sum not in excess of $8.00 a year.

Periods of Practical Experience for Medical Students

Dr. E. J. Goodwin, delegate from Missouri, presented a resolution that had been adopted by the Missouri State Medical Association providing that medical schools be encouraged to arrange for periods of practical experience for students with practiotioners of high standing, preferably in rural communities, and that the Council on Medical Education and Hospitals be instructed to consider the plan proposed by the Missouri State Medical Association and, if the plan is found to be feasible and beneficial, the Council be urged to encourage medical schools to "inaugurate suitable methods for providing these vacation periods of practical experience for their students." The Reference Committee on Medical Education reported favorably on this resolution, and it was adopted by the House of Delegates.

Safety of Milk for Human Consumption

Dr. A. T. McCormack, delegate from Kentucky, submitted a resolution providing that "it is the sense of the American Medical Association that the determination of measures necessary for insuring the safety of milk for human consumption is a duty and function of the medical profession through the duly constituted public health officials of this country." The Reference Committee on Hygiene and Public Health recommended the adoption of the resolution and this recommendation was approved by the House of Delegates.

Committee on Military Affairs and National Defense

Dr. H. C. Mallory, delegate from the U. S. Army, presented a resolution providing for the appointment by the Board of Trustees of a special permanent committee to be known as the Committee on Military Affairs and National Defense, to which shall be referred matters pertaining to national defense and military preparedness. The adoption of this resolution was recommended by the Board of Trustees and this recommendation was

approved by the House of Delegates.

National Defense Act of 1920

Dr. Holman Taylor, delegate from Texas, introduced a resolution providing that the American Medical Association, through its House of Delegates, go on record as heartily approving the National Defense Act of 1920. The Reference Committee on Legislation and Public Relations reported the resolution favorably, and it was adopted.

Increased Tariff on Surgical Instruments

Dr. Albert Soiland, delegate from California, submitted a resolution providing that the House of Delegates record its opposition to the passage of a bill providing for increased tariff on surgical instruments, x-ray equipment, vacuum tubes, valve tubes and scientific glassware. The Board of Trustees recommended the adoption of the resolution, and the House of Delegates approved this recommendation.

Standards of Physical Fitness of Automotive Operators

Dr. H. C. Macatee, delegate from the District of Columbia, presented a resolution setting out that relatively few accidents occur because of defects of sight and hearing and providing that the House of Delegates "consider the advisability of amending the present standards of physical fitness of automotive operators, adopted by this Association, by the adoption of standards of mental and moral fitness to be recommended for adoption by the several states as a condition for issuing licenses to operate motor vehicles, and that this resolution be referred to a special committee for consideration and report at the next annual session." The Reference Committee on Hygiene and Public Health recommended the adoption of the resolution. On motion of Dr. G. Henry Mundt, delegate from Illinois, the resolution was amended by deleting a statement in the preamble to the effect that relatively few accidents occur because of defects of sight and hearing. The resolution as amended was adopted.

Medical Expert Opinion

Dr. Tom B. Throckmorton, delegate from the Section on Nervous and Mental Diseases, submitted the following resolutions, which had been approved by that Section:

Whereas, The House of Delegates of the American Medical Association has previously expressed its dissatisfaction with the present status of medical expert opinion evidence and has expressed its approval of the efforts of the American Bar Association and of the various bar and medical societies to correct by remedial legislation and by changes in court procedure the present undesirable features of the introduction of such evidence, and,

Whereas, The American Psychiatric Association and the National Crime Commission are devoting much study to the subject of such evidence, particularly as relates to psychiatric matters in criminal cases, with a view to improving procedure, and,

Whereas, The Criminal Law Section of the American Bar Association has appointed a committee to collaborate with a committee of the American Psychiatric Association in formulating plans for bringing about a betterment of the present undesirable situation, and,

Whereas, Such efforts are of vital interest and importance to the entire medical profession, be it, therefore,

Resolved, That the House of Delegates of the American Medical Association express its continued interest in the correction of the abuse of medical expert opinion evidence, and that it offer to the American Bar Association, the American Psychiatric Association, and the National Crime Commission, the various state and county medical and bar associations, and such other reputable organizations as are actively pursuing efforts directed toward such correction the assistance and co-operation of the American Medical Association in promoting the passage of appropriate legislation and in bringing about suitable changes in court procedure with reference to such evidence, and be it further

Resolved, That the House of Delegates approves the principle of securing in the case of all capital charges and in the case of as many other criminal charges as the psychiatric facilities of the state will permit an impartial and routine mental examination of the defendant in advance of the trial as a means of obviating the contentious introduction of partisan testimony, and that it approves further the principle of removing as far as possible the question of sanity from the trial itself, reserving the employment of psychiatric data for a

post-trial inquiry to determine what treatment is appropriate to the convicted person, and be it further

Resolved, That a copy of this resolution be forwarded to the American Bar Association, the American Psychiatric Association, and the National Crime Commission.

On motion of Dr. Throckmorton, seconded by Dr. A. T. McCormack, delegate from Kentucky, and after discussion by various members of the House, these resolutions were adopted by the House of Delegates.

Resolution From Section on Dermatology and Syphilology

Dr. F. W. Cregor, delegate from the Section on Dermatology and Syphilology, submitted resolutions providing that treatment for hypertrichosis by the tricho system and by allied systems employing radiation be condemned as highly dangerous to the patient, and "that all cases presenting the effects of this type of treatment and seen by members of the medical profession be reported to the Bureau of Investigation of the American Medical Association." The resolutions were adopted.

Amendment to the Principles of Medical Ethics

The Judicial Council, in its report to the House of Delegates, recommended that Section 3, Article VI, Chapter II of the Principles of Medical Ethics be amended by substituting the following:

Commissions

Sec. 3.—When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called or under any guise or pretext whatsoever.

This recommendation of the Judicial Council was adopted by the House of Delegates, and the Principles of Medical Ethics were so amended.

Message From President of Woman's Auxiliary

Dr. J. H. J. Upham, member of the Board of Trustees, presented a report from the Woman's Auxiliary to the House of Delegates submitted by its President, Mrs. Allen H. Bunce, of Atlanta, Georgia, and this message was accepted by the House and made a part of its records.

Election of Officers

The following officers were elected:

President-Elect, William Gerry Morgan, Washington, D. C.

Vice-President, Ernst A. Sommer, Portland, Oregon.

Secretary, Olin West, Chicago.

Treasurer, Austin A. Hayden, Chicago.

Speaker of the House of Delegates, F. C. Warnshuis, Grand Rapids, Michigan.

Vice-Speaker of the House of Delegates, Albert E. Bulson, Fort Wayne, Indiana.

Member of the Board of Trustees, D. Chester Brown, Danbury, Connecticut, reelected.

Member of the Board of Trustees, Allen H. Bunce, Atlanta, Georgia, to succeed E. H. Cary, Dallas, Texas.

The President, Dr. M. L. Harris, made the following nominations for standing committees:

Judicial Council, James B. Herrick, Chicago.

Council on Medical Education and Hospitals, M. W. Ireland, Surgeon General, U. S. Army; James S. McLester, Birmingham, Alabama.

Council on Scientific Assembly, Lewis H. McKinnie, Colorado Springs, Colorado.

These nominations by the President were confirmed by the House of Delegates.

Honorary Fellow

Dr. Josef Jadassohn, of Breslau, Germany, was nominated for Honorary Fellowship by the Section on Dermatology and Syphilology, and this nomination was approved by the Council on Scientific Assembly. Dr. Jadassohn was elected to Honorary Fellowship by the House of Delegates.

Place of 1930 Annual Session

Detroit, Michigan, was selected as the place for holding the next annual session of the American Medical Association in 1930.

STUDY IN FITTING RING OF THOMAS SPLINT

Charles S. Young, Los Angeles (Journal A. M. A., Aug. 24, 1929), describes how to fit this ring on the basis of anatomy—the encumbent use on the lower extremity, the ambulatory use on the lower extremity and the Thomas arm splint.

WHY I BELONG TO MY PROFESSIONAL ASSOCIATION*

ARTHUR D. LITTLE, M.D.
Thomasville

I belong to various medical associations because it brings me in contact with men who are interested in the same line of work and because I am obliged to belong. Any doctor who fails to attend medical meetings and fails to read the professional articles published by their official journals for a period of ten years, may still retain a good practice, but he will not be on speaking terms with modern medicine.

If for any reason all the medical societies and associations should become disorganized tomorrow, the progress of medicine would be paralyzed.

I belong to and support my medical associations because they are responsible for the fact that through the centuries since their formation they have been able to imbue every individual in the profession who is worthy of the title of M. D. with the fact that it is his duty to give his time and his talents to suffering humanity to the end that they may have relief from affliction and obtain a longer span of life, and all to be given without any thought of financial remuneration.

All I have to do now is to prove this proposition.

In the year 1798, the British Islands, Continental Europe and the Orient, were in the throes of a terrible epidemic of smallpox, the death rate was appalling and it was hard to find a living individual who was not pox-marked, and Jenner, a country doctor living out from London, observed that milk-maids who had contracted cow-pox were immune to small-pox. So he tried to find individuals on whom to conduct experiments and Royalty itself supplied a Princess as the first experimental subject. The experiment was successful and a way had been found to eradicate this lothsome disease.

Did Jenner try to keep his findings a secret? No. He went to his medical association and gave them every detail.

Lord Lister next appears on the scene and tells the members of his society that he has discovered a means of cutting off a leg and not have the remainder rot off—gives them all the details, asks them to come down to his hospital and see how it is done and observe the results. No secret—modern surgery was thus born.

Lister could have kept his discovery a secret; could have run down to the London Times-Enterprise, inserted an ad to the effect that he was the only living surgeon who could operate and not have blood poison as a sequel—and could have in this manner made millions. The only one, so far as I know, who benefited financially on this discovery was one Mr. Lambert, an American manufacturer, who put *Listerine* on the market and by clever advertising, using *Halitosis* as a capitalizing medium, has cleaned up a cool million.

Then came Pasteur, giving to the world a serum for Rabies.

Then came Ehrlich with Diphtheritic Antitoxin. Just suppose he had lacked the true professional ideal of service and had entered negotiations with the Lydia E. Pinkham Corporation. He could have named his price, and the afflicted would have paid dearly for the drug.

Wish I had time to tell you the story of Ehrlich, who killed 605 apes and baboons before he was able to announce that he had a cure for syphilis.

Would like to give you the details of the first case we treated with 606. It was in the early history of 606. We had the drug and the patients who needed it, but, the hospital had a little slip which the patient had to sign to the effect that in case of death, neither the hospital or the doctor could be held responsible. So we had to find a crazy, paralyzed negro, who after the first dose was able to move his lower limbs; after the second, could walk and talk, how we kept him in jail between treatments for fear he would quit us, and finally how he was making his living cutting cross ties.

Ehrlich received nothing for this remedy. How much can you imagine he could have incorporated for?

Then came our own Crawford W. Long with the discovery of Sulphuric Ether. This discovery created a great hullabaloo years la-

(Continued on Page 428)

*Address before the Rotary Club, Thomasville, Georgia.

PRESIDENT'S ADDRESS*

DAN M. CARTER, M.D.
Madison

Mr. President, Ladies and Gentlemen:

To meet in this historic city is a treat for any kind of an association and a particularly happy event for medical men. The city's many splendid institutions, its elegant people and the talented personnel of its professional contingent lend a special interest to such a meeting, not only to the physicians of the district but to many physicians scattered over the state and South.

There is doubtless as much efficiency and loyalty in the Medical Association of Georgia as in any other organization of professional men, but it is apparent to any thoughtful physician that a great number in the rural sections and smaller towns are so engrossed with the care of their patients and in other affairs, that the men in the cities are so engrossed in the same thing plus staff meetings, amusements and "what-not," that interest in the county medical society, as such, has reached a rather low ebb.

Under our present system, the county society is the unit of the state Association. There are one hundred and sixty-one counties in the state. In the June number of *The Journal* the counties listed as composing the Medical Association of Georgia number one hundred and seven. Apparently, from this, one-third of the counties of the state are entirely out of the Association. A conservative estimate would place fifty per cent of the one hundred and seven as functioning very weakly or maintaining a mere skeleton organization, as in my own county of Morgan. The membership of the state Association stands approximately at eighteen hundred, or about ninety per cent of the eligible registered physicians in Georgia. It would be interesting to know what number of these live in cities of five thousand or more. In the Eighth District, with about one hundred and fifty physicians, there are only eighty-eight members of the Medical Association of Georgia, and this about reflects the condition over the state generally.

Good roads, automobiles, small city hospitals and laboratories and the thinning ranks of villages and country physicians, with the consequent widening of the range of their practices and increasing pressure upon their time all contribute to the gradual disintegration of the county society. This situation certainly does not strengthen or promote the influence of the state Association. The merging of several county societies into one has helped a little, very little. The district societies do not solve the problem, as the same condition exists within their organizations. Some plan of action should be initiated by which every eligible physician could be brought into the Association, and I believe that fully ninety per cent of the white, active, legal practitioners of medicine in the state are eligible for membership under the Association's standards.

Under the present system, which seems to be unwieldly and obsolete, the spirit of a large portion of the membership seems well expressed in the slang phrase, "let George do it," only in our case, it is mostly Allen. Far be it from me to minimize the efforts and accomplishments of the superb officials of the state Association, but they are handicapped by the looseness of our organization. They deserve more support and more influence. The difficulty in obtaining legislative support of the agencies and programs of the state department of health and laws for protection of the public by strengthening the Medical Practice Act and the idiotic type of legislation recently introduced for the embarrassment of physicians has given rise to the erroneous impression in some quarters that the medical profession is somewhat divided against itself and sometimes does not know itself what it wants. It is lamentably true that what has been done has been accomplished through the herculean efforts of a faithful few.

No one would advocate the abolishment of county or district societies. It is neither necessary or desirable where they exist, but their non-existence in other counties should

(Continued on Page 428)

*Address before the Eighth District Medical Society, Athens, Ga., August 14, 1929.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

SEPTEMBER, 1929

NEWER OBSERVATIONS ON TETANY

Tetany is a symptom complex characterized by an increased irritability of the nervous system manifested by muscular tremors and convulsive seizures affecting particularly the hands and feet. There is an increased irritability of the peripheral nerves to the galvanic current and often a variation from the normal response to the opening and closing of the circuit. At times there is an increased sensitivity of the sensory and acoustic nerves to electrical stimuli. Mechanical irritation by pressure over the nerve (Trousseau) or by tapping (Chvostec) may induce muscular spasms.

That it is the peripheral neuron which is altered has been demonstrated by the fact that convulsive seisures still occur in the hind extremities of the experimental animal after the spinal cord has been severed. Furthermore, the electrical irritability of the peripheral nerve may be altered in a characteristic manner by perfusing an extremity with the blood of a parathyroidectomized animal or with blood from which calcium salts have been removed. (McCallum).

Tetany occurs in a variety of conditions, some of which have been definitely shown to be associated with an increased elimination of calcium and a decrease in the blood calcium and calcium in the nerve tissues. Of these the tetany associated with rickets, in infants, the tetany following parathyroidectomy and that following administration of phosphates are most noteworthy. In addition tetany may follow or accompany conditions tending to exhaust the calcium reserve of the body such as pregnancy, parturition or debilitating illnesses such as typhoid fever. In such cases the administration of large amounts of calcium salts either intravenously or orally, or the use of regulators of calcium metabolism such as actinotherapy, vitamin D, or parathyoid hormone, is usually followed by a disappearance of the symptoms.

Tetany may also occur where the calcium content of the blood is normal but where the acid base equilibrium of the body is disturbed. Thus alkalosis caused by injection of bicarbonate solution or prolonged forced breathing may induce tetany. Convulsions following parathyroidectomy may be controlled by the injection of acid (Wilson). Chronic obstruction from duodenal pathology, dilation of the stomach or operations on the stomach which exclude acid from the duodenum often leads to tetany and this is accompanied by an alkalosis. (McCann).

It has been suggested that in cases of tetany where the calcium content of the blood is normal and no alkalosis can be demonstrated, that there is a disturbance of the normal relationship between the organic and inorganic and the ionized and un-ionized calcium of the blood and tissues. Work is being done to investigate this relationship which bids fair to make a valuable increase in our knowledge of the subject.

It has been commonly observed that in other conditions of hyper-irritability of the nervous system less definitely manifest than tetany the administration of calcium—rich foods or calcium salts combined with actinotherapy or administration of vitamin D has been beneficial. We do not know definitely how ultra-violet light, vitamin D, or parathyroid hormone regulate the metabolism of calcium nor do we know definitely how disturbances of the calcium metabolism, calcium ionization or the acid base equilibrium of the body affect the irritability of nervous tissue. It is to be hoped that our understanding of these problems will soon be increased and that with this will come a better grasp of the significance of tetany.

J. C. M.

Next Annual Session
MEDICAL ASSOCIATION OF GEORGIA
Augusta, May 14, 15, 16, 1930

MEDICAL ENGLISH

What is that which first strikes us, and strikes us at once, in an educated man; and which, among men of education, so instantly distinguishes the man of superior mind, that "we cannot stand under the same archway during a shower of rain without finding him out?"—S. T. Coleridge (1772-1834). The Conversation of an Educated Man.

When I was a member of the John Temple Graves Literary Society at the Statesboro High School, we had, in addition to the usual officers, a special officer whom we called the "Critic." The "Critic" attended all meetings with notebook in hand and immediately wrote down all errors in the use of English which were made by any of the speakers. At the end of each meeting he reported all mistakes which he had observed and at the same time gave the names of the speakers who had made them.

Having often thought that such an officer would find work to do at many of our medical gatherings, and desiring to test out the idea, I have, during the past few weeks, jotted down some of our most glaring blunders. The following are typical examples: "Acute appendix," "chronic sinus," "operated an appendix," "operated a gall-bladder," "operated a case," "typhoid serum," "cold serum," "flu serum," "shots of insulin," "shots of 606," "shots" of this and that, "good kidneys," "bad kidneys," "bad liver," "temperature" for fever, "tubercular" for tuberculous, "proven" for proved.

A patient may have "acute appendicitis," an "acute abdominal condition" or a "chronic sinusitis," but we have no more excuse for using the terms "acute appendix," "acute abdomen" and "chronic sinus" than we have for "acute foot," "acute face" or "chronic heel." I have operated a cotton gin but cannot understand how some of our skilled surgeons "operate a case" or "operate an appendix." We use the words "vaccine" and "serum" so carelessly that it is impossible for even an intelligent druggist to interpret correctly an oral order for either without a detailed explanation. The use of the word "shot" to signify the subcutaneous, intramuscular or intravenous administration of any substance is the lowest of slang.

What is the cause and what is the remedy for this laxity? Teachers and so-called leaders are careless with both the spoken and the written word. Students, interns and young physicians imitate their elders. Just because a "great" surgeon or internist "gets away with it" when he "murders the King's English" does not add luster to his fame. The remedy is a perfectly frank criticism of our practices and a more frequent use of the dictionary. The publications of the American Medical Association are models of correct English—this is particularly true of *The Journal*, which is the best edited medical publication in the world.—Allen H. Bunce, M.D., Fulton County Medical Bulletin, Atlanta, Ga., March 21, 1929.

—Reprinted from the International Surgical Digest, Vol. 7, No. 5, May, 1929.

THE PRESIDENT'S TOUR TO SOUTHERN MEDICAL ASSOCIATION CONVENTION IN MIAMI, FLA.*

There is a tour to Miami being planned by the Medical Association of Georgia on the occasion of the annual convention (meeting) of the Southern Medical Association. This convention will be held November 20th to the 22nd. This motorcade will start on the morning of the 18th and will reach Miami during the afternoon of the 19th.

When Brunswick, Jacksonville, St. Augustine, Palm Beach and other places of interest are reached, we shall tour through these places under guidance of some local man who will exhibit the points of interest. The night en route will be spent at Daytona.

An invitation has been sent to the President of the South Carolina Medical Society and through him an invitation has also been extended to the membership of the Medical Association of South Carolina. A reply states that these physicians are interested; that the invitation will be published in The Journal and that they expect to be well represented.

The medical profession of Georgia is, of course, invited and we hope to have a large and representative crowd. The cars will return individually.

As soon as you have decided to join the tour, will you please notify the Secretary, Dr. Allen H. Bunce, Atlanta, Ga., giving the name and style of your car. Also size of tires, so repair man can be prepared for you in case of trouble.

Remember: Be ready to leave Savannah at 7:00 a. m., November 18, 1929, from the DeSoto Hotel.

*Schedule and acceptance are printed on page 442.

CLINICS AND THE CONSERVATION OF THE DOCTOR

One of the outstanding problems in medical economics, which faces the younger men in the practice of medicine, is the development of clinic, corporation, insurance, and mutual benefit society medical care of the sick. In practically all of the larger centers this type of medical care has already made it difficult for the individual doctor to maintain his practice.

In some of the charity or semi-charity clinics there is no social service investigation of cases, or where this exists, it is very superficial and inadequate, acting chiefly as a blind rather than a preventive of abuses. There is no discrimination between patients who are able to pay and those who are entitled to charity or cut rate service. As a result many patients are seen in these clinics who are better dressed and more prosperous than the doctors who minister to them without pay. Many corporations and industries now maintain physicians who give all or part of their time on a salary basis for the care of the employes. Insurance companies and mutual benefit societies employ other doctors to care for their constituency, the cost of this service being included in the premiums or in small payments made periodically by members of the societies. By these and other methods of obtaining medical care on a small salary basis, it is estimated, that in cities over half of the population is removed from the province of the individual practicing physician.

The pernicious aspect of the situation is that these clinics are not always formed in answer to a real need, or to fill a deficiency in the care of the sick, but in many cases simply to further the interests of some church, society or fraternal organization. Often the clinic will have the endorsement of a doctor or doctors who seek personal agrandizement by it—a short-sighted policy, since it reacts to the detriment of the profession generally and thus can have at best only a temporary benefit to the condition of these doctors.

Coincidental with this change during the past decade or two, there has been a marked increase in the amount of time, money, and effort which must be expended to equip an individual to practice medicine. If one invests eight or ten years and twice as many thousand dollars in a business he expects to get a reasonable return on his money. Where one dedicates his life to the care of the sick, surely a reasonable living and a comfortable old age should be assured. But as a matter of fact the increased investment and decreased returns from the practice of medicine have in recent years decreased the number of physicians to an extent which is certainly significant and in some localities alarming. Thus a considerable portion of the population, who are able and willing to pay for individual medical care, are faced with a danger of being unable to secure the services of competent private practitioners.

The tendency is toward clinic, corporation or state medicine. It is true that in certain cases the heavily endowed clinic is a boon and makes possible great improvement in the care of the patient. This is particularly true where such clinics are able to furnish equipment which is too expensive for the individual physician to maintain, such as the collection of radium in treatment of cancer, and all of the intricate means of clinical study and research which are the foundations of our scientific advance. However, such institutions should work in co-operation with and not in competition against the local physicians. They should be the ports and bases of supplies in our war upon disease, while the local physicians should be recognized as the all-important army in the field.

The individual physician, particularly the type of family physician, fills a most important part in service to the community. Without his diagnostic aid, his personal interest and more human touch with his patients they cannot make intelligent or satisfactory use of the machinery of science as established in the clinics.

In cancer and many of the conditions best treated by the clinics, an early diagnosis by the family physician is the greatest hope of final cure. It is, therefore, most important that it be recognized as his function to take the patient to the clinic, but that his connec-

tion with the case should not cease then. Here is the opportunity for that fine co-operation which exists between ethical practitioners in other phases of medicine. Where patients are referred to clinics for radium or other highly specialized care the local physician should be kept in charge of the case as consultant and follow it through as his case. Where such patients are able to pay, the physician should receive, as consultant, a fair remuneration for his service. This would solve the problem of an unfriendly relation between clinics and practitioners and keep the individual physician at his post in the first line of defense against disease. He is the sentry at the gate and watchman on the wall and should be kept alert, enthusiastic, and economically independent.

It is our task to educate the people to realize the importance of keeping the physician at his post and to keep ourselves fitted for the opportunities and responsibilities of this position.

J. C. MASSEE, M.D.

—Bulletin of the Fulton County Medical Society, August 15, 1929—

DISTRICT MEETINGS

DATES AND PLACES

Second District, October 11th, Thomasville.

Third District, November 13th, Dawson.

Sixth District, December 4, Griffin.

Ninth District, Wednesday, September 18th, Winder.

Twelfth District, January, Eastman.

HONOR ROLL FOR 1930

Dr. G. Y. Moore, Cuthbert, Secretary-Treasurer, Randolph County Medical Society, maintains first place on the honor roll of county societies by reporting Randolph County 100 per cent on September 5, 1929.

BURKE COUNTY MEDICAL SOCIETY OFFICERS

President ..... W. Harry Sutton, Midville.
Vice-President ..... J. B. Lewis, Waynesboro
Secretary-Treasurer ..... Wm. R. Lowe, Midville.
Delegate ..... Robert L. Miller, Waynesboro.

SEMI-ANNUAL MEETING OF THE SECOND DISTRICT MEDICAL SOCIETY

Donalsonville, Ga., April 12, 1929.

The meeting was called to order at 11 o'clock by the President, Dr. Tom Chason.

Invocation by Rev. J. Henry Bush. Address of welcome by Col. J. T. Goree. In response to this cordial welcome, Dr. C. K. Sharp, President of the State Association, who is also a member of the Second District Society, thanked Col. Goree in behalf of the society.

The minutes of the last meeting were read by the secretary and approved as read, after which the scientific program was entered into.

Scientific Program

The first paper, "Burns and Their Treatment," was presented in an admirable way by Dr. R. F. Wheat, of Bainbridge. This paper was freely discussed by members present as well as by visiting doctors.

The second paper, by Dr. E. F. Wahl, of Thomasville, dealt with the treatment of heart disease. This was an extremely broad subject and practical points were well covered by Dr. Wahl. The prevention was particularly discussed. Owing to the length of the paper, the allotted time having expired before the essayist had finished, it was unanimously voted that he be given sufficient time to finish the paper, as all present were very much interested in this subject. The paper was discussed by Drs. Wilkinson, Redfearn, Neill and Wahl.

The third paper was presented by Dr. C. W. Roberts, of Atlanta. This was entitled, "Present-Day Surgery, With Special Reference to Factors of Safety." It would be impractical to attempt to give a synopsis of this subject as presented by Dr. Roberts. He spoke in his usual attractive way, without manuscript, and touched upon many factors that have to do with safety of present-day surgery which I am sure if followed by those practicing surgery should be of inestimable aid. He particularly emphasized the necessity of avoiding operation without a thorough study of the case in conjunction perhaps with the medical man, feeling that it is impossible to separate the branches of medicine and surgery. The paper was discussed by Dr. Moore, of Thomasville, and Dr. Patterson, of Cuthbert.

Following Dr. Roberts' paper the following committees were appointed:

Nominating Committee—Drs. Rogers, Spooner and Redfearn.

Committee to decide upon place of next meeting—Drs. Holland, Hayes and Wahl.

Committee to draw up resolutions on the death of Dr. J. D. Brown—Watt, Fort and Wilkinson.

Adjournment for luncheon was announced at this time and a delightful luncheon was enjoyed in the hotel dining room, at which time the society was entertained by delightful musical selections and reading.

Immediately following the luncheon the scientific program was continued.

The fourth paper on the program was read by Dr. Benjamin Bashinski, of Macon. The subject of this paper was "The Laboratory as An Aid in the Diagnosis of Diseases of Children." This paper showed a thorough knowledge of the subject and careful study and preparation of the paper and brought to the society many helpful suggestions to those interested in treating the diseases of children. Dr. Bashinski's paper was discussed by Dr. E. F. Wahl, after which the committee reports were received as follows:

Meeting Place—Thomasville.

Men appointed to read papers next time:

Medicine—Dr. E. C. Smith, Donalsonville.

Surgery—Dr. C. H. Watt, Thomasville.

E. E. N. and T.—Dr. E. L. Lawson, Moultrie.

The following officers were elected for the ensuing year:

President—Dr. H. M. Moore, Thomasville.

Vice-President—Dr. F. K. Neill, Albany.

Secretary-Treasurer—Dr. C. H. Watt, Thomasville.

There being no further business, the meeting adjourned.

CHAS. H. WATT, M.D.,
Secretary-Treasurer.

WHY I BELONG TO MY PROFESSIONAL ASSOCIATION

(Continued from page 422)

ter, as the friends of Dr. Morton, of Boston, Mass., claimed he discovered Ether prior to Long. I think Crawford W. Long was the first to make and use it, but the old Georgia Cracker lived a hundred miles from a railroad, and his society would not meet for nine months, so he just waited for that event, but he was thoughtful of his college professors at the University of Pennsylvania, and wrote them about it, and this just about saved him. Mind you, had either Morton or Long desired to patent the product, they could have done so, but in reviewing all the correspondence I failed to find any correspondence with the Patent Office in Washington. The whole fight was to determine who had the honor of giving this boon to suffering humanity. Not one penny of money was ever involved.

Then came typhoid serum, toxin-antitoxin, insulin, the discovery of the transmission of yellow fever—every one with the same unselfish history. So when we worship at the shrines of Jenner, Lister, Pasteur, Ehrlich, Banting, Walter Reed, Carroll, Dakin, Long, Flexner, Osler and hundreds of others, we are paying homage to our medical organization, and having caught the spirit, do you wonder at the disgust we feel for quackery, under whatever guise, because we realize that they are capitalizing human suffering and affliction, the one thing we have sworn to protect.

PRESIDENT'S ADDRESS

(Continued from page 423)

not impair the influence of the state Association. A practical reversal of the system, whereby such societies derived their authority, contact and encouragement from the state Association, after the manner of the service club organizations, might work well. Under such a plan a single member might take care of the interests of the state Association in a county where no society exists or they might be handled direct from the headquarters of the Association. Whatever the plan the situation urgently demands the active affiliation of the other members of the profession in Georgia. Its accomplishment would immeasurably enhance the prestige and influence of the state Association and greatly simplify its endeavors.

LEARNING THERAPEUTICS

(Continued From Page 409)

in the swamp gets. He wants to give some strange drug, that can only be given by intravenous injection, but the plain method of treating malaria, that has been studied and checked by Dr. Bass in 20,000 cases without a single failure is good enough.

I think emphasis on standardization is what we need in this group of diseases in which we have actual, specific therapeutics.

WOMAN'S AUXILIARY
MEDICAL ASSOCIATION OF GEORGIA
OFFICERS

President—Mrs. Marion T. Benson, Atlanta.
President-elect—Mrs. Chas. C. Harrold, Macon.
1st Vice-President—Mrs. J. A. Selden, Macon.
2nd Vice-President—Mrs. H. D. Allen, Sr., Milledgeville.
3rd Vice-President—Mrs. J. A. Redfearn, Albany.
Recording Secretary—Mrs. Lee Howard, Savannah.
Corresponding Secretary—Mrs. W. H. Garrison, Clarkesville.
Treasurer—Mrs. Chas. E. Waits, Atlanta.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Editor—Mrs. C. W. Roberts, Atlanta.

DELEGATES TO A. M. A. (1930)

Mrs. William R. Dancy, Savannah.
Mrs. C. C. Hinton, Macon.

DELEGATES TO S. M. A., MIAMI

Mrs. J. Cox Wall, Eastman.
Mrs. Ralston Lattimore, Savannah.

HEALTH FILM LIBRARY FUND

At a meeting of the Woman's Auxiliary to the Medical Association of Georgia, held at Macon, May 7-8-9-10, the following resolutions were adopted:

Resolved, That the Woman's Auxiliary to the Medical Association of Georgia establish a Health Film Library Fund. Money for this purpose may be contributed by county auxilaries or by interested individuals. The fund shall be kept separate from all other state moneys and used for the rental, carrying charges, or other expenses necessary. Be it further

Resolved, That each county auxiliary assume the responsibility of planning during the year a Health Program in each county, using one or more health films. This program should be as far reaching as possible. There should be co-operation with the local Parent-Teacher Associations, schools, and other women's clubs. If there is a local theater, effort should be made to have the film shown there both at a special meeting and on the public program.

Resolved, That this should be in charge of a standing committee known as the State Health Film Committee. This committee shall make and keep a list of approved health films, both free and rentable. As far as possible the members of the committee shall preview the pictures, so that they can give a personal recommendation.

Will H. Hays, President, Motion Picture Producers and Distributors of America, Inc., before the American College of Surgeons, Hotel Windsor, Montreal, October 26th, 1926, said in part:

"To possess the motion picture and to deny its use to science is as unthinkable as to have the printing press and to publish novels only, to the exclusion of medical textbooks and treatises on other sciences," Mr. Hays said. "The screen is now and must continue always to be in increasing ratio, the servant—the true instrument of science."

—At the outset, he indicated, it was necessary to determine in what ways films may be used as an aid to medicine. First of all, he found, there is the film in the clinic and in the classroom where the doctor of tomorrow is receiving his training. Next, it is in the hands of the diagnostician, who is studying it for the subtle movements and phases of a case which the camera alone can bring out. Again it is teaching men how to keep well—preventive work as well as remedial. Then it is used in hospitals and in wards where recreation and amusement are essential to rebuilding sick men and women but where only the film can go.

"As I look upon it today," said Mr. Hays, *"the moving picture is simply another great instrument placed in the service bag of the doctor.* As time advances, use of that instrument will grow in importance and he will find it of immeasurable advantage, just as the school teachers of the country are beginning to find it.

"For the moving picture can and will preserve for future generations of medical men—especially surgeons—the technique and operative skill of the eminent surgeons of the day so that these great men of science will continue to 'operate' after their death.

"The moving picture can and will take to the medical schools and clinics of the world the special skill along certain lines which identify a particular surgeon on whom success smiles. And thus will other surgeons learn of him.

"The moving picture can and will help the doctor teach the world the value of health, the importance of proper living, and the need for personal attention to details of

hygiene and contagion which will develop a stronger race of healthy men.

"Scarcely a disease exists which is not adaptable to study by moving pictures. The action of the heart, the flow of the blood, sleeping sickness, cancer, etc., etc., may all be studied under *this new powerful microscope which misses nothing* and which paints with accuracy every single development and every single motion of the patient.

"And I can think of few things more important to surgeons and medical students throughout the world than to have in their own clinics perhaps thousands of miles from the operating room, pictures of the greatest masters performing the operations for which they are so justly distinguished. These men, with their operations recorded on films, may never pass away so long as the celluloid imprints survive. Mayo, Crile, Blake, Cushing, Stewart, Armstrong, Chipman will never die. We could see Murphy, Senn operate today. A few hundred feet of celluloid film, small enough almost to be put into an overcoat pocket, can take the work of the masters of technique to the most remote parts of the earth, where students by the thousands and the tens of thousands may sit at their feet and learn. The provincial medical man, handicapped by distance, by lack of funds, and opportunity, acquires a knowledge that otherwise he could never obtain.

"The moving picture camera can catch isolated glimpses of the slowly developing disease over periods of time and bring them together to make the whole intelligible just as modern manipulation of the camera can make the petals of a flower unfold themselves in a minute, whereas the unfolding process in nature may require weeks.

On the other hand, the rapid spasmodic muscular movements incident to lesions of the brain centers can be analyzed by the slow motion picture with equally good results.

The use which various industries have made of motion pictures is limitless. Films teaching employees the best methods of operation, films teaching safety, films teaching conservation, films exploiting goods, films encouraging good health and better living conditions, films for entertainment purposes in industrial community halls, films of every sort and description marching along in the full swinging stride of industrial progress."

From the Motion Picture

Motion pictures to teach surgery and medicine have become a reality.

The first two of an extensive series that is being produced by the Eastman Kodak Company for the American College of Surgeons was shown at the annual meeting of that body in Detroit.

This series of pictures will be made available, through sale or rental, for doctors, hospitals and nurses throughout the world. Surgeons in out-of-the-way localities may rent pictures showing operations of masters. A plague may threaten an obscure community. Films showing the most modern methods of treatment will be rushed to the scene. A small town hospital wants to give its patients the same treatment that is given in the finest hospitals. Films may be rented that will show in detail the most modern methods.

Two Pictures Ready

The two pictures prepared under the supervision of eminent men selected by the American College of Surgeons are "Infections of the Hand" and "Nursing Our Neighbors."

The first picture, which shows important methods of operations for treating hands is expected to be of great value to surgeons who treat men and women who are injured in accidents in industrial plants. This will teach surgeons everywhere the most modern ways for saving hands and fingers that under many conditions would be amputated.

The picture on "Nursing" has to do with the most approved methods of hospital standardization and nursing and will bring to even the most isolated hospitals and nurses training schools throughout the world the newest technical procedures in saving lives through proper nursing.

"These two pictures lead the way for an extraordinary motion picture course in surgery and medicine," said Mr. Hays, who is honorary chairman of the Board on Medical Motion Picture Films of the American College of Surgeons. The other members of the board are Dr. J. Bentley Squier, Dr. W. W. Chipman, Dr. Franklin Martin, Dr. Bowman Crowell, Dr. Malcolm MacEchern, Dr. C. H. Mayo and Dr. George W. Crile.

In addition to the above, such films as "How the Fires of the Body Are Fed"; mechanical processes that take place during digestion of food. This film is recommended by Mrs. John O. McReynolds.

"How to Live Long and Well" embodies the consensus of authentic opinion in correct habits of sensible healthy life; "The Fly as a Disease Carrier"; structure of common house fly, his part in carrying disease and suggestions for extermination, may be shown.

The purpose of the motion picture primarily is to entertain, but it has the ability not only to amuse but to instruct, and knowledge thus acquired is more understandable and more securely grasped.

Dr. John J. Tigert, United States Commissioner of Education, has called the screen "the most powerful weapon against ignorance the world has ever known." Arthur Brisbane said it will be "literally possible to teach a child in three-quarters of an hour, and teach well, more than a child can learn under proper methods in a dozen school days of eight hours each."

The Woman's Auxiliary feels that in establishing this Health Film Library Fund it is rendering a lasting service and "Service is the supreme commitment of life."

LUCILE FLANDERS SELDEN, Chairman, State Health Film Committee, Woman's Auxiliary, Medical Association of Georgia.

EIGHTH DISTRICT MEETING

The annual meeting of the Woman's Auxiliary of the Eighth District was held at the Country Club in Athens on August 14th.

Mrs. Paul L. Holliday, Athens, presided. Mrs. D. V. Bailey, Elberton, District Manager, being absent. Twenty-seven members were present.

Program follows:

Devotional—Dr. Cartledge, Athens.

Welcome—Mrs. H. W. Birdsong, Athens.

Response—Mrs. D. N. Thompson, Elberton.

The following officers and visitors were introduced:

Mrs. Marion T. Benson, Atlanta, State President; Mrs. C. W. Roberts, Atlanta, Editor; Mrs. A. A. Rogers, Commerce.

Minutes of the previous meeting were read and adopted.

Reports from county auxiliaries.

Music by Misses Maurice Cutler and Loma Lawrence, Athens.

Address, "The Health Work in Clarke County," by Mrs. W. R. Warren, Athens.

Presidential address by Mrs. Marion T. Benson, Atlanta.

Mrs. Paul L. Holliday, Athens, was elected District Manager for the ensuing year.

The meeting adjourned and the members of the auxiliary joined the doctors at a barbecue dinner.

Respectfully,

MRS. G. L. LODEN, Secretary.

MADISON COUNTY AUXILIARY

The Woman's Auxiliary to the Madison County Medical Society was organized March 14, 1929, at Danielsville, Ga., meeting in the home of Dr. and Mrs. W. D. Gholston. Six members were enrolled and officers were elected for the year. Mrs. H. G. Banister, Ila, President; Mrs. H. H. Hampton, Colbert, Vice-President; Mrs. G. L. Loden, Colbert, Secretary-Treasurer.

We hold our meetings once each quarter, meeting in the home of one of its members. The medical society meets at the same time. In addition to the business meetings, we have a program of readings, lectures and music, also a social hour is enjoyed after the business program.

In 1928 we put on a dental campaign for the schools of the county. Dr. N. G. Slaughter, of Athens, lectured to the society at one of these meetings. A dentist from Athens, at a stated time, visited the schools at Danielsville, Colbert and Ila. Quite a number of children's teeth were examined and they took advantage of the opportunity of having dental work done in Athens with the dentist who visited their schools.

On July 30, 1929, the society met with Dr. and Mrs. H. G. Banister, of Ila, entertaining with a barbecue and picnic at Mason's Mill. The guests on this occasion were Dr. and Mrs. H. M. Fullilove, Dr. and Mrs. Hubert, of Athens, and Miss Lord, of Ila.

Everyone enjoyed the splendid hospitality of Dr. and Mrs. Banister, it being one of the most enjoyable and profitable meetings held.

MRS. W. D. GHOLSTON, Reporter.

WARE COUNTY AUXILIARY

The Woman's Auxiliary to the Ware County Medical Society met June 6, 1929, at the home of Mrs. J. E. Penland, with eight members present. The Secretary-Treasurer's report was approved as read. Under the head of new business Mrs. Reavis, the President, appointed Mrs. H. G. Huey, of Homerville, Manager for the Eleventh District; Mrs. B. O. Quillian, Willacoochee, Secretary-Treasurer.

The delegate to the state meeting, Mrs. R. L. Johnson, gave a detailed report of the proceedings, which was so complete and told of so many activities and entertainments that every member who had not attended felt that she had missed not only a good meeting but a wonderful opportunity to get an incite into the way in which doctors' wives could aid their husbands in their plans for future work.

The plan of Dr. W. R. Dancy, President of the State Medical Society, to sponsor one student in medicine annually and loan him the money for his medical education was discussed.

Mrs. C. M. Stephens, who was the delegate from the Waycross Chapter of the American Red Cross, to the National Convention held in Washington, D. C., in May,

gave a most interesting report of her attendance.

There being no further business, the meeting adjourned.

MRS. KENNETH MCCULLOUGH, *Secy.*
Waycross, August 27, 1929.

To the Members of the Medical Association of Georgia:

Every individual member of our Association takes a vital interest in its progress and success. This interest penetrates deeper and stimulates his latent powers into action in behalf of his medical organization when he knows that it is accomplishing results. As an officer of your organization, I can assure you that it is making definite and gratifying progress. Such that it compares most favorably with other state medical organizations. It is with a sense of pride that I mention some specific instances, which should appeal to your pride also.

The Association has obtained for its membership medical defense insurance with coverage of damages, the premium being at the cost price, which is nearly fifty per cent cheaper than the cost of a single independent policy covering the same features.

The district societies are especially active and prosperous this year. The attendance has been exceptionally large and the scientific programs unusually instructive. The First, Third, Sixth, Eighth, Tenth and Twelfth District Medical Societies have held banner meetings this summer. This is another manifestation of the general awakening to the benefits and pleasures in organized medicine in Georgia.

Another of the policies adopted this year was to increase the membership, if possible. We are pleased to advise that during the four months of the present year the number of members of our Association has increased more than forty over what it was at the end of the past year. This is a most creditable result.

The officers of the Association have asked the Councilors of the several districts to obtain from the county societies the names of all physicians in their respective counties who are not members of the Medical Association of Georgia and to state which of these are ethically eligible to membership, and which are not, and why they are not. This information must be in the hands of the President and the Secretary in order for them to accomplish the desired increase in membership this year.

As President of your Association I earnestly appeal to the Councilors to continue their diligent efforts to acquire this information, and to the President and Secretaries of the county societies to enthusiastically support this work of the Councilors by promptly and conscientiously rendering the services mentioned. Appreciating the great value of this information, rendered without further delay, to the Medical Association, I am confident that you will not fail in performing this duty and thereby endorsing the efforts of the officers to elevate the Medical Association of Georgia to its highest pinnacle of success and influence.

WM. R. DANCY, M.D., *President.*

THE PRESIDENT'S TOUR TO THE SOUTHERN MEDICAL ASSOCIATION MEET AT MIAMI, FLA.

Feeling assured that a tour (motorcade) to Miami, in November on the occasion of the Southern Medical Association meeting, would cement even closer that splendid fellowship which always exists among the physicians of our great state; that it would give us, the profession in Georgia, an opportunity to extend a very friendly invitation to our friends, the profession of South Carolina, North Carolina, Tennessee, Alabama, and Florida; and that it would attract attention to our splendid Association by this distinctive action, it was proposed that we organize the President's Tour.

The officers and members of the Medical Associations of South Carolina, Tennessee, North Carolina, Alabama and Florida have been invited to meet us in Savannah ready to depart 7:00 A. M., November 18th. Some have accepted the invitation and have expressed great pleasure at being invited. A large motorcade is expected.

It is planned to leave Savannah at seven in the morning, and travel at an average

speed of thirty-five miles per hour. On reaching cities of interest a local doctor will board the leading car and direct a tour through the city. This will not only enable the members of the tour to get a glimpse of the coast cities, but will enable a certain number of cars to be serviced and those which have fallen by the wayside from accident, etc., will be able to catch up with the tour.

Lunch will be "taken on" at Jacksonville. It is hoped to have all eat at one great table.

The first night will be spent at Daytona. Stops will be made at Brunswick, Jacksonville, St. Augustine, Daytona, West Palm Beach and probably other places. The trip will require two days from Savannah. The cars will return individually after reaching Miami.

Following the tour will be service cars fully equipped with repair parts, tools, tires, gas, oil, mechanics, and electricians all ready to serve the unfortunate. The tour will be in charge of a Committee of Marshals. Each six to ten cars being under charge of one Marshal.

It should be called to your attention that the entire distance from Savannah to Miami is 513 miles. The Atlantic Coastal Highway is paved all the way with cement or asphalt. This should be an ideal trip and a very large attendance is expected. The October *Journal* will carry a slip which is an application for a place in the tour, there being no charge. It should be filled out promptly and sent to the President.

The following is a tentative schedule:

Southern Medical Association Meeting
Miami—November 19, 20, 21, 22

Schedule for the President's tour from Savannah, Ga., to Miami, Fla.

November 18, 1929

Miles		
0	Leave Savannah	7:00 A. M.
84	Arrive Brunswick	9:30 A. M.
	Stop in Brunswick for incidentals one - half hour.	
	Leave Brunswick	10:00 A. M.
70	Arrive Jacksonville	12:00 Noon
	Stop in Jacksonville one hour for lunch.	
	Leave Jacksonville	1:00 P. M.
41	Arrive St. Augustine	2:15 P. M.
	Stop in St. Augustine one-half hour.	
	Leave St. Augustine	2:45 P. M.
31	Arrive Bunnell	3:45 P. M.
26	Arrive Dayton Beach	4:30 P. M.
	Spend night at Daytona Beach.	

Second Day
November 19, 1929

	Leave Daytona Beach	8:00 A. M.
15	Arrive New Smyrna	8:30 A. M.
51	Arrive Cocoa	10:00 A. M.
22	Arrive Melbourne	10:45 A. M.
48	Arrive Ft. Pierce	12:00 Noon
	Half an hour for incidentals.	
	Leave Ft. Pierce	12:30 P. M.
59	Arrive West Palm Beach	2:00 P. M.
	One hour for lunch.	
43	Leave W. Palm Beach	3:00 P. M.
23	Arrive Ft. Lauderdale	4:30 P. M.
	Arrive Miami	5:15 P.M.

*The Presidents of the Medical Association of Alabama, North Carolina, South Carolina and Tennessee are invited to join the President's tour at Savannah, Georgia, on November 18th at 7:00 A. M.

ACCEPTANCE

Your invitation to be a participant in the President's Tour to Miami, Florida, to attend the annual session of the Southern Medical Association; leaving Savannah, Georgia, at 7:00 A. M., November 18, 1929, is accepted.

Name .....

Address .....

Type and name of car .....

Size of tires .....

Service car will accompany tour and every one is expected to use it if necessity demands. Mail your acceptance to Dr. William R. Dancy, President, 102 Jones Street, West, Savannah, Georgia.

BOOKS RECEIVED

The Challenge of Chronic Diseases, by Ernst P. Boas, M.D., attending Physician, Montefore Hospital for Chronic Diseases, and Nicholas Michelson, M.D., Adjunct Physician, Montefore Hospital for Chronic Diseases. Within the past few years the attention of those who are interested in public relief work has been directed with ever greater insistency to the disastrous effects of chronic diseases on the individual, on his immediate family and on society at large. Social workers encounter insuperable difficulties in placing chronic invalids in appropriate institutions, overseers of the poor find the chronic sick encumbering almshouses, which have no facilities for their care, general hospitals refuse admission to many because they can retain them only for short periods of time and have no place to which to discharge them once they have been admitted.

Contains 197 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City. Price $2.50.

Psychiatry in Industry, by V. V. Anderson, M.D., Director of Medical Research, R. H. Macy & Company, Inc. Dedicated to Mr. Percy Straus, whose foresight and clear vision have made possible this, the first psychiatric approach to personal work in business; whose sane outlook and helpful guidance have made it practical. Contains 364 pages. Publishers: Harper & Brothers, 49 East 33rd Street, New York City. Price $4.00.

Selected Readings in Pathology from Hippocrates to Virchow. Edited by Esmond R. Long, M.D., Professor of Pathology, University of Chicago. Contains 301 pages. Publishers: Charles C. Thomas, Springfield, Illinois. Price $4.00.

The Road to Health. The Jayne Foundation Lectures for 1929, by C. E. A. Winslow, Dr. P.H., Professor of Public Health, Yale School of Medicine; Fellow and Past President, American Public Health Association: Member, Public Health Council, State of Connecticut. Member, Health Committee, League of Nations. The story of man's fight against disease begins in the days of "superstitious" medicine and ends with the achievements of scientific medicine, for which the author envisages an even greater future. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City.

The Treatment of Fractures, by Lorenz Bohler, M.D., Chief Surgeon and Director of the Vienna Hospital. Authorized English translation by E. M. Steinberg, M.S., M.D., of Portland, Oregon, formerly senior officer of the Surgical Service of the United States Public Health Service Hospital, and Consultant Surgeon to the United States Veterans' Bureau at Portland, Oregon. Publishers: Medical Bookseller, Publishing Department, Vienna, Austria.

COMMUNICATIONS

To the Editor:

In addition to the articles enumerated in our letter of June 29, the following have been accepted:

Abbott Laboratories.
- Viosterol—Abbott.

Benzol Products Co.
- Neocinchophen—B. P. C.

Dick X-Ray Co.
- I-X Barium Meal.

Parke, Davis & Co.
- Parke, Davis & Co.'s Viosterol.

E. R. Squibb & Sons.
- Viosteral Squibb 100 D.
- Squibb's Viosterol Cod-Liver Oil 5 D.
- Squibb's Viosterol Cod-Liver Oil 5 D Mint-Flavored.

Terrell's Laboratories.
- Rabies Vaccine Phenolized, Terrell.

COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION.

Chicago, July 28, 1929.

To the Editor:

In addition to the articles enumerated in our letter of July 28, the following have been accepted:

Abbott Laboratories,
- Abbott's Viosterol Cod Liver Oil.

Ciba Co., Inc.,
- Atoquinol-Ciba.
- Vioform-Ciba.

Eli Lilly & Co.,
- Inhalant Ephedrine (Plain)-Lilly.
- Hypodermic Tablets Ephedrine Hydrochloride-Lilly, 0.016 Gm. ($\frac{1}{4}$ grain).
- Hypodermic Tablets Ephedrine Hydrochloride-Lilly, 0.0325 Gm. ($\frac{1}{2}$ grain).
- Hypodermic Tablets Ephedrine Sulphate-Lilly, 0.016 Gm. ($\frac{1}{4}$ grain).
- Hypodermic Tablets Ephedrine Sulphate-Lilly, 0.0325 Gm. ($\frac{1}{2}$ grain).
- Lilly's Ephedrine Jelly.
- Ointment Ephedrine Compound.
- Syrup No. 110 Ephedrine Sulphate.
- Syrup No. 111 Ephedrine Sulphate.

Mead Johnson & Co.,
- Mead's Powdered Lactic Acid Milk, Non-Curdling No. 1 with Dextrose.

COUNCIL ON PHARMACY AND CHEMISTRY,
American Medical Association.

Chicago, August 30, 1929.

NEWS ITEMS

Dr. Chas. C. Hinton and Dr. W. W. Chrisman, Macon, announce their association for the practice of internal medicine. Suite 210 Doctors Building, 700 Spring Street. Dr. Chrisman is a graduate of Vanderbilt University School of Medicine, Nashville, Tennessee.

Dr. Chas. H. Fields, formerly of Bradenton, Florida, has removed to Alpharetta and opened offices for the practice of medicine.

The Tenth District Medical Society met at Augusta on August 14th. The scientific program was made up of the following titles: Hydrogen Iron Concentration by Dr. John C. Wright of Augusta, discussed by Dr. V. P. Sydenstricker, Augusta; Diabetes by Dr. J. Dewey Gray of Augusta, discussed by Dr. Irvine Phinizy; Pellagra by Dr. R. C. McGahee of Warrenton, discussed by Dr. J. H. Butler, Augusta; The Early Recognition of Cancer by Dr. G. T. Bernard of Augusta, discussed by Dr. Hugh N. Page, Augusta; The Mobile Colon by Dr. W. R. Houston of Augusta, discussed by Dr. C. W. Crane, Augusta.

The Wilcox County Medical Society met at Abbeville on August 22nd. Dr. E. C. Harris of Rochelle, read a paper on Pellagra which was discussed by all the members.

The Ware County Medical Society met in the office of Dr. Chas. M. Stephens, Waycross, on August 7th.

Dr. J. Elmo Garner, formerly of Wauchula, Florida, has removed to Thomaston and opened offices in the Stephens Building for the practice of medicine. Dr. Garner is a graduate of the Baltimore Medical College, Baltimore, Maryland.

The Eighth District Medical Society met at Athens on August 14th. Beginning at 10:15 clinics were given at the Athens General Hospital on the following subjects: Cancer of the Stomach by Dr. Stewart R. Brown, Royston; Heart Cases by Dr. A. C. Holliday, Athens; Kidney Cases by Dr. H. W. Birdsong, Athens; Ruben and Huhner Tests by Dr. Paul L. Holliday, Athens; Early Treatment of Cataract by Dr. J. C. McKinney, Athens; Pernicious Anemia by Dr. M. A. Hubert, Athens; Gallbladder Cases by Dr. R. M. Goss, Athens; Hypertrophy of Liver by Dr. H. W. Birdsong, Athens. Clinics were given at Saint Mary's Hospital as follows: Fractures of Thigh and Hip by Dr. H. M. Fullilove, Athens; Renal Glycosuria and Pernicious Anemia by Dr. G. O. Whelchel, Athens; Chronic Constipation by Dr. T. R. Aycock, Monroe. In the afternoon a paper was read by Dr. H. I. Reynolds, Athens, on Coronary Thrombosis. At the Athens Country Club, beginning at 12:30 P. M., addresses by Dr. D. M. Carter, Madison, President of the Eighth District Medical Society; and Dr. William R. Dancy, Savannah, President of the Association.

Dr. Zach W. Jackson, Atlanta, is in New York City taking an eye internship at the Bellevue Hospital.

The Science Committee to the Century of Progress of the National Research Council, with offices at 40 West Fortieth Street, New York City, announce that achievements made in the medical and allied professions during the past one hundred years through the aid of pure and applied science may be graphically shown at the Chicago World's Fair Centennial Celebration to be held in 1933. Leading authorities in these professions have been invited to serve on the National Research Council Science Advisory Committee to the Fair. They have been asked to advise ways and means as how to interpret in a concrete tangible form the advances made in their respective fields since applied science entered their fields up to the present day.

Dr. Lovick W. Pierce announces the opening of his office at 301-5 Doctors Building, Macon. Practice limited to Urology.

Dr. John M. Walton announces the opening of his office for the practice of medicine and surgery at 105 Forrest Avenue, N. E., Atlanta.

Dr. E. O. Shellhorse, Dalton, sustained lacerations and broken fingers of the left hand in an automobile accident near Gainesville on August 7th.

Doctors Wallace L. Bazemore and V. H. McMichael announce their association for practice of urology and urological surgery, suite 512 Macon National Bank Building, Macon.

Dr. Mary J. Erickson, Thomasville, was in Rochester, Minnesota, during August taking a post-graduate course.

Dr. H. A. Moore, formerly of Reidsville, has moved to Lakeland.

Dr. W. W. Hardman, a graduate of the University of Georgia Medical Department, Augusta, has opened an office in Elberton for the practice of medicine.

Dr. M. E. Winchester, Director of County Health Work, delivered an address before the Lions' Club at Waycross on August 27th.

Dr. Theodore Toepel, Atlanta, was appointed one of the five executive officers of the International Congress for the Crippled Child, which met recently at Geneva, Switzerland. The Congress was made up of eminent physicians who limit their practice to the care and treatment of crippled children. Twelve nationalities were represented in the deliberations.

The physicians of Carrollton have equipped and opened a hospital, known as "The Carrollton Clinic," for the treatment of patients. The clinic is modern in all its appointments. It includes offices for the doctors, operating and x-ray rooms together with rooms for the convenience of the patients and nurses.

Industrial Hygiene Conference held at Emory University on August 17th was attended by about two hundred and fifty physicians, public health officers and mill officials. Those delivering addresses were: Dr. Albert E. Russell, former Assistant Surgeon General of the United States; Dr. E. W. Glidden, Alto; Dr. T. F. Abercrombie, Commissioner of Health, state of Georgia; Dr. Stewart R. Roberts, Atlanta; Dr. Wm. Funkhouser, Atlanta; Dr. Eugene E. Murphey, Augusta; Dr. M. A. Fort, Bainbridge; Mr. H. W. Pittman, representative of the Bibb Manufacturing Company; and Mr. H. J. Grimes, representative of the mills in Chicago.

The Spalding County Medical Society met at the Griffin Hospital on August 20th.

Dr. J. H. Nicholson announces the removal of his offices to 26 Linden Avenue, N. E., Atlanta.

Dr. J. B. Avera announces the opening of his offices for the practice of medicine and surgery at 206 Dunwody Building, Brunswick.

The Randolph County Medical Society met on September 3rd. Papers were read by Drs. D. L. Smith, Cuthbert, and W. W. Binion, Benevolence; Case Report by Dr. Loren Gary, Georgetown.

Dr. Geo. L. Echols, Milledgeville, has been at the Boston Psychopathic Hospital, The Commonwealth of Massachusetts Department of Mental Diseases, Boston, Massachusetts, for some time taking a post-graduate course. He will take additional work at the Manhattan State Hospital, New York City, after leaving Boston.

Dr. R. H. Fike, physician in charge of the Steiner Clinic, Atlanta, announces that as a result of the appropriation of one hundred thousand dollars by the General Assembly of Georgia, that the largest medical institution in the United States devoted exclusively to the treatment of cancer will be established in Atlanta.

MEDICAL ASSOCIATION OF GEORGIA*

Office

ATLANTA, GEORGIA

FINANCIAL STATEMENT

Balance in Bank May 1, 1928		$ 4,720.57
Total Receipts from all sources		14,152.33
Total to be accounted for		18,872.90
Balance in Bank May 1, 1929	$ 3,667.47	
Total expenditures from May 1, 1928 to April 30, 1929	15,205.43	
Total accounted for		$18,872.90

DISBURSEMENTS

May 1, 1928 to April 30, 1929

No.	*Description*		*Amount*
1020—	E. K. Large, Postmaster, Postage		$ 30.00
1021—	Allen H. Bunce, M. D.: Salary as Secretary-Treasurer for April, 1928		150.00
1022—	H. L. Rowe: Salary as Executive Secretary for April, 1928		175.00
1023—	Wm. A. Mulherin, M. D.: Balance on Honorarium as President for 1927-1928		75.00
1024—	Price & Mapes, Savannah: Painting fifteen signs for annual session		31.50
1025—	Wm. A. Mulherin, M. D.: Floral offering for Dr. T. D. Coleman, Ex-President of Association, from Stubbs Nursery, Augusta	$15.00	
	Ruth I. Hill & Company Augusta, multigraphing and mailing letters for President	16.54—	31.54
1026—	Mrs. Irene H. Snyder: Credit on account for reporting annual session of Association, 1928, at Savannah		150.00
1027—	Southern Press Clipping Bureau: News clippings for April, 1928		5.00
1028—	Dr. Clifford G. Grulee, Chicago: Transportation from and return to Chicago and other expenses attending annual session of Association at Savannah, 1928, as an invited guest		125.00
1029—	Lyon-Young Printing Co.: Printing and mailing 2,000 copies of the April issue of Journal		538.50
1030—	Atlanta Envelope Co.: 10,000 Letterheads and 10,000 Envelopes		70.20
1031—	Benj. F. Stovall: Multigraphing letters to secretaries of county societies, mailing out Delegate's Credential cards, letters to Committee on History of Medicine in Georgia, abstracts of the Basic Science bill		8.00
1032—	Lester Book and Stationery Co.: Gem clips and paper for multigraphing abstracts of Basic Science Bill		2.30
1033—	Southern Engraving Co.: Cuts used as illustrations in Journal		17.11
1034—	Auld's, Inc., Columbus, O.: "Badge of Service" for President, Wm. A. Mulherin		3.34
1035—	Howard & Timms: Binding ten volumes of 1927 Journals		15.00
1036—	Cash: Paid night watchman to protect merchandise of exhibitors in Hotel DeSoto, Savannah, during annual session of Association, May 7 to 11, 1928; help for securing tables and arranging display of exhibitors; cards for Georgia and Emory Alumni dinners; telephone and telegraph; and tablets for registration		23.78
1037—	H. L. Rowe: Transportation to and from Savannah attending annual session of Asciation, May 7 to 11, 1928, hotel and meals		45.45
1038—	J. N. Reisman: Rent for May, 1928		21.50
1039—	Bryan & Middlebrooks, Attys.: Fee for Pemberton Cooley, Atty., for representing Dr. L. J. Sharp, deceased, in suit of Cole vs. Sharp		50.00
	1,000 Examination records for health examinations at the annual session of Association at Savannah		7.00
1042—	C. L. Ayers, M. D.: Expenses incurred as Councilor to May 3, 1928		16.17
1043—	M. M. McCord, M. D.: Expenses incurred as Councilor for Seventh District to May 26, 1928		18.00
1044—	Mrs. Maud O'Conner: Registering members of the Association for Emory and Georgia Alumni dinners and annual banquet of Association		10.00
1045—	Dr. J. S. Cochran, Norcross: Refund amount of check mailed direct in payment of annual dues for 1928		5.00
1046—	E. K. Large, Postmaster: Postage		30.00

1047—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for May, 1928 ..... 150.00

1048—H. L. Rowe:
Salary as Executive Secretary for May, 1928 ..... 175.00

1049—Lyon-Young Printing Co.:
Printing 700 programs for annual session of Association ..... $ 55.00
Printing and mailing 2,000 copies of the May issue of Journal ..... 538.50— 593.50

1050—Lester Book and Stationery Co.:
Registration book, pencils, carbon paper, and rubber bands 5.00

1051—Southern Press Clipping Bureau:
News clippings for May, 1928 ..... 5.00

1052—Bennett Printing & Stamp Co.:
700 badges for annual session of Association, 1928 ..... 59.50

1053—J. N. Reisman:
Rent for June, 1928 ..... 21.50

1054—Benj. F. Stovall:
Multigraphing cards for appointments for health examinations, letters for advertisers, and cards to mail delinquent members 9.20

1055—E. C. Thrash, M. D.:
Expenses as delegate to the annual session of the American Medical Association, Minneapolis, June 11 to 15, 1928 ..... 100.00

1056—C. W. Roberts, M. D.:
Expenses as delegate to the annual session of the American Medical Association, Minneapolis, June 11 to 15, 1928 ..... 100.00

1057—Allen H. Bunce, M. D.:
Expenses as delegate to the annual session of the American Medical Association, Minneapolis, June 11 to 15, 1928 ..... 100.00

1058—Miss Annie Jacks:
Commission on advertisement of Southern Ry. and Southeastern Sanatorium 16.75

1059—C. K. Sharp, M. D.:
Payment on Honorarium as President for 1928-1929 ..... 50.00

1060—E. K. Large, Postmaster:
Postage 30.00

1061—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for June, 1928 ..... 150.00

1062—H. L. Rowe:
Salary as Executive Secretary for June, 1928 ..... 175.00

1063—Keelin Printing Co.:
150 Charters for county societies ..... $ 24.75
2,000 circulars — Radio Waves 16.00
Delegates Credential Cards 5.75
3,000 Statements 10.00
6,000 Envelopes and 6,000 letterheads for officers 65.10
$121.60
Less account for advertising 50.00 71.60

1064—J. N. Reisman:
Rent for July, 1928 ..... 21.50

1065—Benj. F. Stovall:
Multigraphing letters and directions for advertising of the Inter-State Post Graduate Medical Association of North America 4.25

1066—J. P. Stevens Engraving Co.:
1,000 Letterheads and 1,000 envelopes for President, C. K. Sharp, M. D. 32.70

1067—Lyon-Young Printing Co.:
Printing and mailing 2,000 copies of the June issue of Journal 538.50

1068—Underwood Typewriter Co.:
Repairing typewriter 13.90

1069—Lester Book & Stationery Co.:
Paste, typewriter ribbon and second sheets 6.65

1070—Bryan Electric Co.:
Installing new batteries for house phone 5.00

1071—Southern Press Clipping Bureau:
News clippings for June, 1928 ..... 5.00

1072—Fulton Printing Co.:
5,000 Booklets with covers containing copy of the Basic Science bill 85.26

1073—E. K. Large, Postmaster:
Postage for mailing copies of the Basic Science bill with letters to members of the Association 30.00

1074—E. K. Large, Postmaster:
Postage for mailing Journal—deposit 25.00

1075—E. K. Large, Postmaster:
Postage 30.00

1076—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for July, 1928 ..... 150.00

1077—H. L. Rowe:
Salary as Executive Secretary for July, 1928 ..... 175.00

1078—Mrs. Irene H. Snyder:
Balance account for reporting annual session of the Association, Savannah, May 9, 10, 11, 1928; meetings of the House of Delegates; and Councilors, including carbon copies 382.75

1079—J. N. Reisman:
Rent for August, 1928 — 21.50

1080—Southern Press Clipping Bureau:
News clippings for July, 1928 — 5.00

1081—Lester Book & Stationery Co.:
Twine, wrapping paper, paper for multigraphing reading notices sent

1082—Lyon-Young Printing Co.:
Printing and mailing 2,000 copies of the July issue of Journal — 538.00

1083—Banner Press:
1,000 Requests for reprints for Package Library, 1,000 Acknowledgements of reprints for Package Library — 29.00

1084—Southern Engraving Co.:
Cuts used as illustrations with article of Dr. Clifford G. Grulee in July issue of Journal — 85.91

1085—Benj. F. Stovall:
Multigraphing letters to officers of county societies and members of Association in reference to Basic Science bill; letters in reference to History; and minutes of the meeting of the Committee on Health and Public Instruction and mailed to officers of civic organizations — 15.00

1086—Frank K. Boland, Treasurer, Abner Wellborn Calhoun Lectureship Fund:
Contribution by the Lowndes County Medical Society and included with remittance for dues — 9.00

1087—C. K. Sharp, M. D.:
Payment on Honorarium as President for 1928-1929 — 50.00

1088—E. K. Large, Postmaster:
Postage — 30.00

1089—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for August, 1928 — 150.00

1090—H. L. Rowe:
Salary as Executive Secretary for August, 1928 — 175.00

1091—Bryan & Middlebrooks, Attys.:
Attorney's fee for Clark & Gibbs, Attys., Jesup, in suit of Mrs. Viola Bishop vs. Dr. J. T. Colvin — $150.00
One-half cost of reporting trial of case of Jewell McDaniel vs. Dr. M. B. Allen — 17.28
Expenses of Grover Middlebrooks, Atty., going to Jefferson for trial of case—McDaniel vs. Allen — 10.60
Telegraph charges in reference to suit — 3.75— 181.63

1092—Southern Press Clipping Bureau:
News clippings for August, 1928 — 5.00

1093—Lyon-Young Printing Co.:
Printing and mailing 2,000 copies of the August issue of Journal — 543.30

1094—Lester Book & Stationery Co.:
Clasp envelopes for mailing copies of the Basic Science bill to officers of county societies — 1.80

1095—Crews Drug Co.:
Cigars sent to Dr. A. S. M. Coleman at Wesley Memorial Hospital — 5.00

1096—J. N. Reisman:
Rent for September, 1928 — 21.50

1097—Southern Engraving Co.:
Two copper cuts used as illustrations in Journal — 7.77

1098—Medical and Chirurgical Faculty of Maryland:
1 Copy of Cordell's Annals — $5.00
1 Copy of Quinn's History of Medicine — 1.00— 6.00

1099—E. K. Large, Postmaster:
Postage — 30.00

1100—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for September, 1928 — 150.00

1101—H. L. Rowe:
Salary as Executive Secretary for September, 1928 — 175.00

1102—Alliance Printing Co.:
Printing and mailing 2,050 copies of the September issue of Journal — $424.08
Printing and inserting 2,050 copies of invitations from Fulton County Medical Society to members to attend the Inter-State Post Graduate Medical Association of N. A. — 9.75— 433.83

1103—E. K. Large, Postmaster:
Deposit for postage to mail Journal — 25.00

1104—Addressograph Co.:
Ribbon for Addressograph — 2.45

1105—Southern Engraving Co.:
11 Cuts for illustrations — 39.04

1106—Benj. F. Stovall:
Multigraphing letters to presidents of county societies advising them that copies of the Basic Science Bill were being mailed; notices to delinquent members; letters to officers in reference to Second Edition of Radio Waves — 14.10

1107—Dixie Seal & Stamp Co.:
Rubber stamp for crediting membership for 1929; and rubber stamp for stamping notices to de-

linquent members 1.30

1108—J. N. Reisman:
Rent for October, 1928 21.50

1109—Western Union Telegraph Co.:
Telegrams sent to all presidents of constituent county societies before election in September in reference to Basic Science bill 33.45

1110—Two Cent Letter Co.:
Multigraphing letters to newspapers in state, and reading notices in reference to meeting of the Inter-State Post Graduate Med. Assn. of N. A. 5.00

1111—Bryan & Middlebrooks, Attys.:
Fee for Early Stark, Atty., representing Dr. M. B. Allen in suit of Jewell McDaniel vs. Dr. M. B. Allen 100.00

1112—Georgia Association:
400 copies of the August, 1928, issue of the publication, "Georgia" for the Committee on Public Policy and Legislation by Dr. Chas. E. Waits, Chairman 40.00

1113—G. Y. Moore, M. D.:
Expenses incurred to October 20, 1928 as Councilor for Third District 75.00

1114—Alliance Printing Co.:
Printing and mailing 2,000 copies of the October, 1928 issue of Journal 420.50

1115—Allen H. Bunce, M. D.:
Salary as Executive-Treasurer for October, 1928 150.00

1116—H. L. Rowe:
Salary as Executive Secretary for October, 1928 175.00

1117—E. K. Large, Postmaster:
Postage 30.00

1118—Fulton Printing Co.:
2,000 Membership cards for 1929 17.50

1119—Southern Engraving Co.:
Cuts for illustrations in Journal 43.94

1120—Lester Book & Stationery Co.:
Paper, pencils, gem clips, ink, typewriter ribbon, and stand for dictionary 22.00

1121—Southern Press Clipping Bureau:
News clippings for September and October, 1928 10.00

1122—Two Cent Letter Co.:
Multigraphing letters to prospective advertisers 2.50

1123—J. N. Reisman:
Rent for November and December, 1928 43.00

1124—E. K. Large, Postmaster:
Postage 30.00

1125—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for November, 1928 150.00

1126—H. L. Rowe:
Salary as Executive Secretary for November, 1928 175.00

1127—Banner Press:
Printing, invoices No. 8168-8169-8170 37.60

1128—Alliance Printing Co.:
Printing and mailing 2,000 copies of the November issue of Journal 418.00

1129—Southern Engraving Co.:
7 Cuts for illustrations 36.00

1130—Southern Press Clipping Bureau:
News clippings for November, 1928 5.00

1131—Atlanta Envelope Co.:
25,000 Envelopes for mailing the Journal 129.02

1132—Samuel G. Walker:
Mounting sheep skin medical diploma of Alexander Avera for use in Medical History, and frame 6.25

1133—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for December, 1928 150.00

1134—H. L. Rowe:
Salary as Executive Secretary for December, 1928 175.00

1135—Alliance Printing Co.:
Printing and mailing 2,075 copies of the December, 1928 issue of Journal, notices to members, and 2,000 copies of Second Edition of Radio Waves 452.95

1136—E. K. Large, Postmaster:
Deposit for postage to mail Journal 25.00

1137—Lester Book & Stationery Co.:
Paper, typewriter ribbon, paste, folders, clips and rubber bands 7.75

1138—J. N. Reisman:
Rent for January, 1929 21.50

1139—Two Cent Letter Co.:
Multigraphing letters mailed for Dr. C. K. Sharp, President, to delinquent members; letters to secretaries of county societies enclosing proofs for Directory of members of respective county societies 5.60

1140—Southern Press Clipping Bureau:
News clippings for December, 1928 5.00

1141—Southern Engraving Co.:
Cuts for illustrations 45.88

1142—Benj. F. Stovall:
Multigraphing letters to secretaries of county societies enclosing blanks for reporting members for 1929 2.25

1143—E. K. Large, Postmaster:
Postage 30.00

1144—Alliance Printing Co.:
Printing and mailing 2,050 copies of the January issue of Journal 428.40

1145—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for January, 1929 150.00

1146—H. L. Rowe:
Salary as Executive Secretary for January, 1929 175.00

1147—Miss Annie Jacks:
Commission on advertising for Pedigree Dairies, Inc. 27.00

1148—Dennis & Dennis, Architects:
Copying layout of City Auditorium, Macon, for completing drawing and making blue prints of space for exhibits during annual session of Association, May 8, 9, 10, 1929 6.25

1149—Outstanding

1150—Bryan & Middlebrooks, Attys.:
Retainer fee for 1929 as attorney for the Association $1,250.00
Fee for J. A. Hixon Atty., Americus, in suit of Wickersham vs. Dr. W. S. Prather 125.00— 1,375.00

1151—J. N. Reisman:
Rent for February, 1929 21.50

1152—American Medical Editor's Association:
Subscription for 1929 3.00

1153—Southern Engraving Co.:
Cut of Medical Diploma of Dr. Alexander Avera 13.68

1154—Lester Book & Stationery Co.:
Card board, wrapping paper and twine 1.35

1155—Southern Press Clipping Bureau:
News clippings for January, 1929 5.00

1156—E. K. Large, Postmaster:
Postage 30.00

1157—Atlanta Blue Print Co.:
Making 100 blue prints of floor space in the City Auditorium at Macon for Commercial and Scientific exhibit space to be used during the annual session of the Association, 1929 24.55

1158—Alliance Printing Co.:
Printing and mailing 2,050 copies of the February, 1929 issue of the Journal, also insert with photograph of Dr. Abner Wellborn Calhoun 451.00

1159—Allen H. Bunce, M. D.:
Salary as Secretary-Treasurer for February, 1929 150.00

1160—H. L. Rowe:
Salary as Executive Secretary for February, 1929 175.00

1161—Edw. K. Large, Postmaster:
Postage, deposit for mailing Journal 25.00

1162—Dr. C. K. Sharp:
Balance on Honorarium as President for 1928-9 50.00

1163—Massachusetts Bonding & Insurance Co.:
Premium on surety bond for Secretary-Treasurer to April 1, 1930 7.50

1164—J. N. Reisman:
Rent for March, 1929 21.50

1165—Howard & Timms:
Binding ten volumes of the 1928 Journals 15.00

1166—Benj. F. Stovall:
Multigraphing letters mailed to officers of District societies, Woman's Auxiliary and other civic organizatons in reference to Conference on Health and Industry held at Macon, March 6, 1929 2.85

1167—Southern Press Clpping Bureau:
News clippings for February, 1929 5.00

1168—Lester Book & Stationery Co.:
Pencils, gem clips, T. W. ribbon and ink 4.25

1169—Two Cent Letter Co.:
Multigraphing letters to prospective exhibitors 2.50

1170—Edw. K. Large, Postmaster:
Postage 30.00

1171—Dr. G. Y. Moore:
Expenses as Councilor for Third District 42.00

1172—Dr. J. A. Redfearn:
Expenses as Councilor for Second District 25.00

1173—Dr. M. M. Head:
Expenses as Councilor for the Sixth District 26.37

1174—Miss Annie Jacks:
Commission on advertising of the Southeastern Sanatorium 6.75

1175—Banner Press:
Post cards—requests for reprints 63.75

1176—Dr. Wm. H. Myers:
Expenses as Councilor for First District 25.00

1177—Dr. C. L. Ayers:
Expenses as Councilor for Ninth District 10.25

1178—Alliance Printing Co.:
Printing and mailing 2,075 copies of the March, 1929 issue of the Journal 382.05

1179—Allen H. Bunce, M. D.:

Salary as Secretary-Treasurer for March, 1929	150.00
1180—H. L. Rowe:	
Salary as Executive Secretary for March, 1929	175.00
1181—J. W. Palmer:	
Expenses incurred as a member of of the Committee on Public Policy and Legislation during the 1927 session of the General Assembly of Georgia. Attending committee meetings and waiting upon members of the General Assembly	48.00
1182—J. N. Reisman:	
Rent for April, 1929	21.50
1183—Southern Press Clipping Bureau:	
News clippings for March, 1929	5.00
1184—Lester Book & Stationery Co.:	
Typewriter paper and pencils	2.50
1185—Benj. F. Stovall:	
Letters to essayists on program and those to lead in discussion, also those left off program; letters to secretaries of county societies enclosing Delegate's Credential cards also to officers of county societies in reference to Cost of Medical Care	9.20
1186—E. K. Large, Postmaster:	
Postage	30.00
1187—Alliance Printing Co.:	
Printing 2,000 Registration cards	9.00
1188—Two Cent Letter Co.:	
Multigraphing letters, postage, envelopes for mailing magazine "Georgia" to all members of the General Assembly of Georgia—Senators and Representatives	30.00
Sept. 28, 1928—Check, J. G. Carter, Scott, returned, bank reported closed	5.00
March 14, 1929—Check drawn on Bank of Midville charged back, Bank reported closed	75.00
Exchange charges for fiscal year ending April 30, 1929 paid the Fulton National Bank, Atlanta	8.70
Total Disbursements	$15,205.43

*Report submitted by the Secretary-Treasurer to the Council, House of Delegates and the Association at its eightieth annual session held at Macon, May 8, 9, 10, 1929.

AUDITING COMMITTEE: Dr. C. L. Ayers, Chairman, presented the following report:

May 9, 1929.

We, the Committee appointed for the purpose of auditing the books of the Secretary-Treasurer, have done so and find all accounts and vouchers correct.

A. S. M. COLEMAN, O. W. ROBERTS, C. L. AYERS.

OBITUARY

Dr. Newton Craig, Atlanta; member; University of the South Medical Department, Sewanee, Tennessee; aged 59; died suddenly at the home of a friend at Lake Ariel, Pennsylvania, on August 4, 1929. At the age of 10, he was sent to the Carey Classical School for boys at Baltimore, Maryland. Following his graduation, he attended the Southwestern Presbyterian University at Memphis, Tennessee. Dr. Craig was a genial and charming conversationalist and a man of great personal magnetism. He was kind and patient to every one. He served in the Medical Corps of the United States Army during the World War. Surviving him are his widow, one son, Newton Craig, Jr.; two sisters, Mrs. Maud Matthews, Atlanta, and Mrs. Richard Brackett, Clemson, South Carolina. Rev. Richard Orme Flinn conducted the funeral services from the home of Dr. Charles Boynton on Habersham Road and interment was in Oakland cemetery, Atlanta.

Dr. Andrew M. Brooks, Loganville; Southern Meidcal College, Atlanta, 1894; aged 63; died suddenly at a private hospital on August 17th. He was a farmer, banker and one of the most prominent business men of that section. Dr. Brooks had practiced medicine in his home community for more than thirty years. Surviving him are his widow, two daughters Misses Mary and Alice Brooks, Loganville; one son, Mr. A. M. Brooks, Jr., Decatur. Funeral services were conducted from the Methodist church by Rev. W. H. Venable.

THE AMERICAN BOARD OF OTOLARYNGOLOGY

The next examination will be given on Monday, October 21st, in Philadelphia, preceeding the opening of the meeting of the American Academy of Ophthalmology and Otolaryngology in Atlantic City.

Prospective candidates for certificates should address the Secretary, Dr. W. P. Wherry, 1500 Medical Arts Bldg., Omaha, Nebraska, for proper application blanks.

DR. H. P. MOSHER, President.

DR. W. P. WHERRY, Secretary.

PROPHYLAXIS AND EARLY TREATMENT OF PNEUMONIA

The prospects for success in the treatment of any disease are admittedly greater, the earlier the patient presents himself for medical attention. This is particularly true in pneumonia.

Many physicians carry a bottle of Optochin Base tablets with them during the winter months, so as to be prepared to institute treatment at the time of diagnosis. They do not wait for definite pneumonia symptoms to appear but prescribe Optochin Base prophylactically in all threatening cases. Cross writes, "The prompt use of Optochin Base in suspected pneumonia should in our opinion be a routine procedure, not delaying its administration for signs of definite consolidation. Chill, temperature elevation, respiratory symp-

toms, and diffuse or limited moist rales are to be considered indications for this drug."

The bactericidal action of Optochin Base is directed specifically toward all types of the pneumonicoccus, so that its use renders unnecessary the preliminary typing of the organism. The adult dosage is 4 grains of Optochin Base by mouth with 5 oz. of milk every five hours, day and night, for three days. If additional liquid is required give more milk in preference to water. No other food or drink is to be given during the course of the Optochin Base. All other oral medication is contraindicated, but hypodermic medication may be employed as required.

Send to Merck & Co., Inc., Rahway, N. J. for more detailed literature and for sufficient Optochin Base for your next case of pneumonia.

DIETS FOR THE IDENTIFICATION OF FOOD ALLERGIES

Jane Dale and Harvey D. Thornburg, Los Angeles (Journal A. M. A., Aug. 17, 1929), offer two diet lists which may be used as the basis of adequate diets for the identification of food allergies. Five menus have been prepared for each diet list which provide adequate amounts of protein, minerals and vitamins for the adult and which may be modified readily to meet his energy requirements. Two menus have been prepared which show the adequacy of these diets for children in all factors except calcium and phosphorus, the utilization of which and of milk is considered separately.

UNITED STATES PHARMACOPOEIAL CONVENTION

Call For the Eleventh Convention For the Revision of the Pharmacopoeia of the United States of America

Boston, Mass., May 25, 1929.

In compliance with the provisions of the Constitution and By-Laws of the United States Pharmacopoeial Convention, the President of the Convention hereby invites the several bodies, entitled under the Constitution to representation therein, to appoint delegates to the Eleventh Decennial Convention to meet in Washington, D. C., on May 13, 1930, and the attention of all concerned is invited to the following extract from the Constitution and By-Laws:

Chapter I, Article VIII, of the By-Laws of the United States Pharmacopoeial Convention provides that the President of the Convention:

"shall issue on or about the first of May of the year immediately preceding that of the decennial meeting, a notice inviting the several bodies, entitled under the Constitution to representation therein, to send delegates to the next meeting. He shall repeat the notification eight months later, and shall request the medical and pharmaceutical journals of the United States to publish the call for said meeting.

Article II, Section 1 of the Constitution provides:

"The members of the United States Pharmacopoeial Convention, in addition to the Incorporators and their associates, shall be delegates elected by the following organizations in the manner they shall respectively provide: Incorporated Medical Colleges, and Medical Schools connected with Incorporated Colleges and Universities; Incorporated Colleges of Pharmacy, and Pharmaceutical Schools connected with Incorporated Universities; Incorporated State Medical Associations; Incorporated State Pharmaceutical Associations; the American Medical Association, the American Pharmaceutical Association; the American Chemical Soceity; the National Association of Retail Druggists, and the National Association of Boards of Pharmacy; *provided that no such organization shall be entitled to representation unless it shall have been incorporated within and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation.*"

Section 2 of the Constitution provides:

"Delegates appointed by the Surgeon-General of the United States Army, the Surgeon General of the United States Navy, and the Surgeon-General of the United States Public Health Service, the Secretary of Agriculture, the Secretary of Commerce, the Association of Official Agricultural Chemists, the Association of American Dairy, Food and Drug Officials, the National Wholesale Druggists' Association, the National Dental Association, the American Drug Manufacturers' Association, the United States Division of Customs, and the University of Havana, and by the organizations not hereinbefore named which were admitted to representation in the Convention of 1900, shall also be members of the corporation. Each body and each branch of the United States Government above mentioned shall be entitled to send three delegates to the meetings of this corporation. But no such delegates as are provided for in this article shall be members until their credentials shall have been examined and acted upon as provided for by the By-Laws. Delegates admitted as members at any decennial meeting shall continue to be members of the United States Pharmacopoeial Convention until their successors shall have been appointed and admitted as delegates to the ensuing Convention and no longer."

LYMAN F. KEBLER, M.D.,

Secretary of the United States Pharmacopoeial Convention of 1930.

1322 Park Road, Washington, D. C.

REID HUNT, M.D.,

President of the United State Pharmacopoeial Convention of 1930.

Medical Association of Georgia

Next Annual Session, Augusta, Ga., May 14, 15, 16, 1930

OFFICERS

President ... Wm. R. Dancy, Savannah
President-elect ... G. Y. Moore, Cuthbert
First Vice-Pres. ... Chas. H. Richardson, Jr., Macon
Second Vice-Pres. ... Grady N. Coker, Canton
Secretary-Treasurer ... Allen H. Bunce, Atlanta
Parliamentarian ... M. A. Clark, Macon

DELEGATES TO THE A. M. A.

Wm. H. Myers (1929-30) ... Savannah
Alternate, Wm. A. Mulherin ... Augusta
E. C. Thrash (1929-30) ... Atlanta
Alternate, C. W. Roberts ... Atlanta
A. H. Bunce (1930-31) ... Atlanta
Alternate, O. H. Weaver ... Macon

COUNCIL

M. M. Head, Chairman ... Zebulon
C. L. Ayers, Clerk ... Toccoa

Councilors

1. Wm. H. Myers (1930) ... Savannah
2. J. A. Redfearn (1930) ... Albany
3. B. T. Wise (1930) ... Americus
4. O. W. Roberts (1930) ... Carrollton
5. E. C. Thrash (1931) ... Atlanta
6. M. M. Head (1931) ... Zebulon
7. M. M. McCord (1931) ... Rome
8. H. M. Fullilove (1931) ... Athens
9. C. L. Ayers (1932) ... Toccoa
10. S. J. Lewis (1932) ... Augusta
11. A. S. M. Coleman (1932) ... Douglas
12. J. Cox Wall (1932) ... Eastman

Vice-Councilors

1. C. Thompson (1930) ... Millen
2. R. F. Wheat (1930) ... Bainbridge
3. Chas. A. Greer (1930) ... Oglethorpe
4. W. H. Clark (1930) ... LaGrange
5. W. A. Selman (1931) ... Atlanta
6. K. S. Hunt (1931) ... Griffin
7. W. H. Perkinson (1931) ... Marietta
8. Paul L. Holliday (1931) ... Athens
9. J. K. Burns, Jr., (1932) ... Gainesville
10. H. D. Allen, Jr., (1932) ... Milledgeville
11. K. McCullough (1932) ... Waycross
12. J. W. Edmondson (1932) ... Dublin

COMMITTEES

Scientific Work

C. H. Richardson, Jr., Chairman ... Macon
C. W. Roberts ... Atlanta
A. H. Bunce, Secretary-Treasurer ... Atlanta

Public Policy and Legislation

Chas. E. Waits, Chairman (1931) ... Atlanta
J. W. Palmer (1932) ... Ailey
A. R. Rozar (1930) ... Macon
Paul Eaton (1930) ... Augusta
V. H. Bassett (1931) ... Savannah
Wm. R. Dancy, President ... Savannah
G. Y. Moore, President-Elect ... Cuthbert
A. H. Bunce, Secretary-Treasurer ... Atlanta
T. F. Abercrombie, Commissioner of Health State of Georgia ... Atlanta

Medical Defense

M. A. Clark, Chairman (1933) ... Macon
W. A. Mulherin (1934) ... Augusta
E. C. Thrash (1931) ... Atlanta
M. M. Head, Chairman of Council ... Zebulon
A. H. Bunce, Secretary-Treasurer ... Atlanta

Hospitals

C. S. Lentz, Chairman (1933) ... Augusta
Grady N. Coker, Secretary (1932) ... Canton
K. McCullough (1934) ... Waycross
Geo. F. Klugh (1930) ... Atlanta
Julian K. Quattlebaum (1931) ... Savannah

Abner Wellborn Calhoun Lectureship

J. E. Paullin, Chairman (1933) ... Atlanta
H. I. Reynolds (1934) ... Athens
E. E. Murphey (1930) ... Augusta
Craig Barrow (1931) ... Savannah
Frank K. Boland (1932) ... Atlanta

Necrology

R. L. Miller, Chairman ... Weynesboro
M. Hines Roberts ... Atlanta
J. R. Broderick ... Savannah

Medical History of Georgia

E. C. Thrash, Chairman ... Atlanta
Frank K. Boland ... Atlanta
M. A. Clark ... Macon
Wm. R. Dancy, President ... Savannah
A. H. Bunce, Secretary-Treasurer ... Atlanta

Crawford W. Long Memorial Prize

Wm. R. Dancy, Chairman ... Savannah
Stewart R. Roberts ... Atlanta
V. P. Sydenstricker ... Augusta
George Bachmann ... Atlanta
R. V. Lamar ... Augusta

Cancer Commission

J. L. Campbell, Chairman ... Atlanta
J. W. Simmons ... Brunswick
G. H. Lang ... Savannah
Chas. H. Watt ... Thomasville
J. C. Patterson ... Cuthbert
A. A. Barge ... Newnan
H. G. Weaver ... Macon
R. M. Harbin ... Rome
M. B. Allen ... Hoschton
Stewart D. Brown ... Royston
W. J. Cranston ... Augusta
J. W. Edmondson ... Dublin
E. L. Bishop ... Atlanta

Advisory Committee—Woman's Auxiliary

B. H. Minchew, Chairman ... Waycross
Marion T. Benson ... Atlanta
Paul L. Holliday ... Athens
Wm. H. Myers ... Savannah
Eugene E. Murphey ... Augusta
Wm. R. Dancy, President ... Savannah
A. H. Bunce, Secretary-Treasurer ... Atlanta

Fraternal Delegates to Other State Meetings

To visit Alabama: R. F. Wheat, Bainbridge; C. K. Sharp, Arlington.

To Visit Florida: W. F. Reavis, Waycross; G. Y. Moore, Cuthbert.

To visit North Carolina: Hal M. Davison, Atlanta; C. D. Whelchel, Gainesville.

To visit South Carolina: Chas. C. Harrold, Macon; Wm. Shearouse, Savannah.

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Par Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

AWTRY & LOWNDES
FUNERAL DIRECTORS
AMBULANCE SERVICE

No Starch

Listers
CASEIN-PALMNUT

Dietetic Flour

Starch-free Diabetic Foods that are appetizing are easily made in the patient's home from Listers Flour. It is self-rising. Ask for nearest depot or order direct.

LISTER BROS. Inc., 41 East 42nd St., NEW YORK

THE WALLACE SANITARIUM

SUCCEEDING WALLACE-SOMERVILLE SANITARIUM, MEMPHIS, TENN.

MEMPHIS, TENN.

WALTER R. WALLACE, M.D.
HUGH W. PRIDDY, M.D.
FOR THE TREATMENT OF

DRUG ADDICTIONS,

ALCOHOLISM, MENTAL AND

NERVOUS DISEASES

LOCATED IN THE EASTERN SUBURBS OF THE CITY. SIXTEEN ACRES OF BEAUTIFUL GROUNDS. ALL EQUIPMENT FOR CARE OF PATIENTS ADMITTED.

DR. BRAWNER'S SANITARIUM ATLANTA, GEORGIA

A modern neuropsychiatric hospital with special laboratory facilities for the study and treatment of early cases; also a department for the treatment of drug and alcoholic addictions.

The Sanitarium is located on the Marietta Electric Car Line ten miles from the center of Atlanta, near Smyrna, Ga. The grounds comprise 80 acres. The buildings are steam heated, electrically lighted, and many rooms have private baths.

Address communications to **Brawner's Sanitarium, Smyrna, Ga.**, or to the office, **157 Forrest Ave., N. E., Atlanta, Ga.**

DR. JAS. N. BRAWNER, Medical Director.
DR. ALBERT F. BRAWNER, Resident Physician.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII | October, 1929 | No. 10

A REPORT OF SIX YEARS' STUDY OF THE INTRAPERITONEAL USE OF NEOARSPHENAMIN AND MERCUROSAL IN CONGENTIAL LUES*

JOSEPH YAMPOLSKY, M.D.
Atlanta

Five years ago it was the privilege of the essayist to present the experiences of the intraperitoneal method of the treatment of congenital luetics before this association. This work was done with the assistance of Dr. George F. Klugh, of Atlanta. We, at that time presented the experimental work on rabbits and also the results of the treatment of two young babies.

I have at present records on over twenty patients. However, before I go into a detailed report of these cases, I want to discuss the treatment of congenital syphilitics in general.

For the last nine years it has been my good fortune to treat many luetic children at the Gray Clinic, which is a part of the Emory University Medical School.

The usual method of treating very young children has been by injecting both the arsenicals and mercurosal preparations deeply into the gluteal muscles. Intravenous medication, especially by injecting neo-arsphenamin in the external jugular vein is practiced in some clinics. The use of the longitudinal sinus has been and should be condemned on account of the danger of the death of the patient. I do not and cannot advise the promiscuous use of the intravenous route either, through the jugular or median basilic vein as only the experienced should attempt to treat children in this manner. The intramuscular method is painful and leaves the patient fairly uncomfortable.

For these reasons, I felt that some new way could be found, which would be simple, could be used by anyone with very little danger and at the same time be painless and most beneficial to the patient.

Blood transfusion, saline and glucose solutions and antitoxin have been given for some time intraperitoneally and I could see no reason why arsenicals and mercurosal could not be given intraperitoneally in young, luetic babies. This work was begun by myself with the pathological assistance of Dr. George F. Klugh in the latter part of nineteen hundred and twenty-three, and the results were presented before the Fulton County Medical Society and the Medical Association of Georgia at the time.

The experimental work was done on many young rabbits. Some rabbits received one-tenth of a gram of neo-arsphenamin for every fifteen pounds (7 Kg.) of body weight; others received mercurosal, one-half grain (0.03 gm.) for every thirty pounds (14 Kg.) of body weight, and the last group were given alternating doses of neo-arsphenamin and mercurosal every other week, intraperitoneally, in the same dosage as the first two groups. The dilution of the neo-arsphenamin was one-tenth of a gram for every two cubic centimeters of distilled water. The mercurosal was given as dissolved in ampules.

When larger doses were given, toxic symptoms were the result and in doses given normally to human beings, no toxic reactions were noticed. These treatments were given for about twenty weeks.

On autopsy the rabbits showed no signs of adhesions or peritonitis, showing that the drugs were absorbed without producing any pathology in the peritoneal cavity.

The injections are given intraperitoneally a little below the umbilicus and to the left

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

with a dull needle. They are given rapidly into the peritoneal cavity. The dose is as follows: neo-arsphenamin is given 0.1 gram in a 2 c.c. solution of normal saline for every fifteen pounds (7 Kg.) of body weight of the patient. The mercurosal is given as it comes in solution, and the dose is 0.5 grain (0.03 gm.) for every thirty pounds (14 Kg.) of body weight of the patient. A course of treatment consists of sixteen weekly injections, the neo-arsphenamin and mercurosal given alternately every week. Thirty days of rest are then allowed and a Wassermann test is done on the patient. If the Wassermann is negative, sixty days are allowed to elapse before the next treatment is given. If the Wassermann test is positive, sixteen more injections are given at once. Two courses of treatment are required during the first year of life.

The value of giving these treatments in early life can only be estimated properly when we realize that the disease in infancy is in acute form, and next to the intravenous method, this is certainly the best. Absorption from the peritoneal cavity is rapid and there is absolutely no discomfort after the treatment.

I have at present in my series twenty cases. Most of these cases have been in very young babies.

Case 1. Father and mother both syphilitic; one of twins, the other died of syphilis. Patient given twelve alternating injections of neo-arsphenamin and mercurosal intraperitoneally. Patient laughing and smiling immediately after treatment. No colic, no pain, no toxic results. Previous to this treatment suffered very much when given intramuscular treatment. Patient now looks well, no signs of congenital lues. Wassermann still positive.

Case 2. This patient was treated by Dr. M. Hines Roberts privately. Patient was in such physical condition that Dr. Roberts thought that any treatment might be tried on a case of this kind. Patient is now robust and healthy, shows no signs of congenital lues, and his Wassermann is negative.

At no time did these two patients show any after effects, and the mothers seemed to be well satisfied with the progress of their children.

These cases were then referred to Dr. Landham for X-ray examination. The following is Dr. Landham's report on the gastro-intestinal tract of both patients:

"Fluoroscopic examination of the abdomen following the administration of an opaque meal shows structures of the lower gastro-intestinal tract to be in normal position and movable on palpation. No evidence of adhesion was observed.

"X-ray examination of the gastrointestinal tract following the administration of an opaque meal shows no evidence of adhesions or abnormal position of any of the structures of the gastrointestinal tract.

"In view of these findings and the experiment on rabbits that you have done, with the results of which I am familiar, I consider your plan of intraperitoneal therapy of decided value."

Case 3. R. S.; white, six months of age, mother's Wassermann four-plus. Mother had two normal children followed by a miscarriage and the patient who was brought for examination. Baby normal up to three months, when the mother noticed that the child's head began to grow large. No convulsions, not able to hold up head, undernourished, head eighteen and five-tenth inches in circumference, fontanelles open, slightly bulging, no teeth, slight rickets. Blood Wassermann four-plus, spinal fluid under pressure, Wassermann two-plus, globulin one-plus, fifteen cells per c.c. Eight doses of neosalvarsan and eight doses of mercurosal given mostly intraperitoneally. At ten months of age the child was sitting alone, holding up its head, crawling on the floor; circumference of head nineteen and five-tenth inches, fontannelles open, blood and spinal Wassermanns both negative. Since last report patient has had another series of treatments and the blood and spinal Wassermanns remain negative.

Case 4. O. A.; three months of age, cries all the time, birth Wassermann negative, now positive, always undernourished, pustular eruption on whole body, condylomata of anus. Sixteen injections, rash disappeared, body gained weight and blood Wassermann negative.

Case 5. C. L.; six months of age, convulsions, eyes closed by purulent discharge, snuffles, undernourished, rachitic head, Wassermann four-plus. Sixteen injections given, Wassermann still positive. After thirty days' rest, sixteen more injections given and now Wassermann is negative, no convulsions, patient gain in weight.

Case 6. Eight months of age, malnourished, box-shaped head, old man facies, saddle

nose, all glands palpable, rosary, pigeon-shaped chest. After sixteen injections, disappearance of glands, old man's facies disappeared, glands not palpable, Wassermann still four-plus.

Case 7. W. A.; seven months of age. Mother claims baby won't get fat, fed on breast and cow's milk, blood Wassermann four-plus. After one course of treatment, this child improved remarkably; Wassermann negative.

Case 8. D. L.; one month of age. Marked syphilitic stomatitis and rhagades. Mother's Wassermann four-plus, baby's Wassermann four-plus. After one series of treatment, stomatitis and rhagades disappeared; Wassermann negative.

Case 9. T. P.; Pseudoparalysis of left arm. Mother's blood four-plus, baby's four-plus. After one series of treatment, Wassermann negative and baby has perfect use of left arm.

Case 10. A. A.; five months of age; mother's blood four-plus, child's four-plus. Child has nystagmus, condylomata of anus and impetigo luetica. This child's physical signs cleared up, but it required thirty-two injections for the Wassermann to become negative.

Case 11. B. F.; five months of age. Mother, child and one brother's Wassermanns strongly positive. Baby has typical secondary eruption on body and condylomata of anus. This case showed marked improvement after the first few treatments, but the Wassermann remains positive.

Case 12. Child three months of age. Father gives history of syphilis, mother and child's Wassermanns strongly positive. Baby is pale, anemic, restless, suffers from constant colds, has pseudoparalysis of left arm, and liver is three centimeters below the intercostal margin. This patient improved remarkably and after the first series of treatment, shows no signs of syphilis and his blood is negative.

Case 13. A. S.: three months of age. Cries and frets all the time, is restless, has snuffles, cervical glands enlarged and spleen palpable. Mother and baby's blood strongly positive. Marked improvement and gain in weight after eight injections. Patient now has negative Wassermann.

Case 14. J. T.; one month of age. Mother has strongly positive Wassermann, one stillbirth. Child's blood strongly positive and does not use left arm. After sixteen injections patient is apparently well, Wassermann negative.

Case 15. M. J.: nine months of age. Mother and child's Wassermanns strongly positive, cannot sit up alone, has macular rash all over body, scanty hair, mucous patches in mouth, condylomata of anus. All these signs disappeared and patient is gaining in weight; Wassermann negative. Sixteen treatments given.

Case 16. E. S.; two months of age, premature, birth weight three pounds, fifteen ounces. Mother gives history of one miscarriage. Wassermann negative at birth, baby's Wassermann strongly positive now. Patient has constant colds and is much undernourished. After a series of treatments baby is improved, slowly gaining. Wassermann negative.

Case 17. J. B.: one month of age. Parents and baby's Wassermann strongly positive. Marked excoriation about mouth, palms of hands and soles of feet peeling. After eight injections patient's symptoms disappeared and Wassermann is negative.

Case 18. A. M.; six months of age. Condylomata of rectum, mucous patch on tongue. Wassermann strongly positive. Sixteen treatments of neo-arsphenamin and mercurosal given—Wassermann negative.

Case 19. V. R.; two weeks old. Cord Wassermann strongly positive, mother's Wassermann positive. No symptoms of syphilis to be noticed on examination. Sixteen treatments as above given—Wassermann negative.

Case 20. E. C.; one month of age. Scar on face that will not heal up by ointments, Wassermann four-plus. After eight treatments of neo-arsphenamin and mercurosal the scar healed—Wassermann negative.

COMMENTS

Rosenberg reported that he gave an injection of neo-arsphenamin intraperitoneally with no untoward results. Since our work has been published it has been corroborated by Grulee and Sanford. Many intricate treatments are published in the literature from time to time, which cannot be of value to the man in every-day practice, as great skill is required to obtain results. The treatment of syphilis in children has been neglected, partly through ignorance and partly through some difficulties encountered in the course of treatment. This method is pleasant to the doctor and patient and requires only the ordinary precautions of asepsis.

CONCLUSION

1. Twenty cases of congenital syphilis treated by intraperitoneal methods are presented for your consideration. The patients received neo-arsphenamin and mercurosal intraperitoneally. Only four of these cases pre-

sent a positive Wassermann reaction after treatment, but none shows any signs of congenital lues.

2. These medications caused no discomfort, death, peritonitis or adhesions, as shown by the autopsies on the rabbits and X-ray examination of the patients. The patients are alive and feel well.

3. The method is simple, requires only sterile instruments and no fear of doing any harm to the patient.

4. Absorption is very rapid from the peritoneal cavity and the results are just as quick as when these medications are used intravenously.

REFERENCES

1. Yampolsky, J., and Klugh, Geo. F.; Treatment of Syphilis in Children by Intraperitoneal Injection of Neo-Arsphenamine and Mercurosal, Jour. Med. Assn. of Georgia.
2. Rosenberg, William: The Intraperitoneal Administration of Neo-Arsphenamine, Jour. Am. Med. Assn.
Sanford, Heyworth N.: Treatment with Intraperitoneal Injection of Neo-Arsphenamine, Jour. Am. Med. Assn.
3. Yampolsky, J.: A Case of Internal Hydrocephalus due to Congenital Syphilis, South. Med. Jour., April, 1928, xxi, 274.
4. Grulee, Clifford G. et al.: Congenital Syphilis, Treatment by Intraperitoneal Injection of Neo-Arsphenamin: Report of Two Years' Work, Am. Jour. Dis. Child., January, 1928, xxxv, 47.
5. Yampolsky, J.: Congenital Lues in Children, Its Treatment by the Intraperitoneal Injections of Neosalvarsan and Mercurosal, Am. Jour. of Syphilis, Vol. xlll, No. 1, P. 121, January, 1929.

DISCUSSION OF PAPER OF DR. YAMPOLSKY

Dr. George F. Klugh, Atlanta: In 1923 Dr. Yampolsky and I carried out some experiments with rabbits preliminary to his work on children. This work was planned by Dr. Yampolsky, and I wish to give him credit for the thorough manner in which the work was outlined. He wanted to prove, first, whether the neo-arsphenamin was absorbed, and in one series of rabbits we gave large doses of neo-arsphenamin purposely to see how rapidly it would be absorbed. In those cases the rabbits died about the same as if the drug were given intravenously. That is, in just a few minutes. When the doses were worked out in the same proportion he was to use with the children they did not affect the rabbits at all. In a series of rabbits there was no evidence of any adhesions whatever after several months. At the time Dr. Yampolsky first read a paper on this subject you may remember that he gave two rabbits the intraperitoneal injections, and nothing untoward happened to the rabbits.

It must be remembered that in treating congenital syphilis you have a condition which, according to some figures given by the American Research Association, when treated by old methods has a very high mortality, only about 5 per cent of the children living through it. I know of no condition that needs more careful and immediate treatment than congenital syphilis. Here we have a method that has been advocated for other medicinal agents. I have just read a report by Montgomery & Cole, of Detroit, in which one or more intraperitoneal blood transfusions in 117 children were reported, with no bad results. In injecting animals I have never seen a case in which the intestines have been perforated, and I have never seen this occur in children when the proper sort of instrument was used. One should use the proper needle, with a comparatively dull point, and as soon as you feel the needle pass through the peritoneum stop the pressure.

I wish to commend Dr. Yampolsky very highly for his work. I consider it conservative treatment.

Dr. Linton Gerdine, Athens: I think Dr. Yampolsky is to be commended for his courage in continuing with this line of work, inasmuch as intraperitoneal therapy is not as popular as it was a few years ago when it first was started. Of course, it is useful in some cases. I think, however, having found anything that is of value in the treatment of congenital syphilis it is well to try to perfect a technic that will make it useful, for in these cases of congenital syphilis almost anything that will help should be tried. I do not know that all of us could be as fortunate as Dr. Yampolsky, and I believe we should be cautious until we perfect a technic equal to his. If his results show that his boldness has not been misplaced, it seems that it is worth while to continue this method of treatment, if done carefully.

Dr. M. Hines Roberts, Atlanta: I was very much interested in Dr. Yampolsky's report, and in his work. I feel as the years go on we have more respect for the peritoneal cavity than we used to have. As Dr. Gerdine said, I think such therapy is on the wane. I use it only in the most extreme cases. As to the treatment of syphilis, in my experience the great majority of these cases can be treated by intravenous therapy, through the scalp of jugular vein. If not, the use of sulpharsphenamin seems to me to offer safe intramuscular treatment. For these reasons, I do not use the intraperitoneal route at all at present.

Dr. Paul Eaton, Augusta: I have permission to discuss Dr. Yampolsky's paper on the basis of using the intraperitoneal route in white rats. The intraperitoneal route seems to me to offer a better chance for this sort of medication. In a series of more than 1,000 white rats which received an intraperitoneal

injection of horse serum, when they came to autopsy in not a single instance was there a sign of trauma or peritonitis.

Dr. Lewis D. Hoppe, Atlanta: I have never used sulpharsphenamin or mercurosal intraperitoneally, but I have used many other things. I have seen as simple a thing as 5 per cent glucose solution produce a chemical peritonitis. I had a very sad experience in perforating an intestine with the needle, which caused death from peritonitis in one patient.

Dr. Joseph Yampolsky, Atlanta (closing): The work presented in this paper was done over a period of six years. We have been very successful in curing most of the patients and at the same time causing no injury to any of them. This work has been corroborated by Dr. Clifford Grulee, who is editor of the American Journal of Diseases of Children, and he is an associate of Dr. Sanford. This treatment is safe and can only be objected to by those who have never tried it.

THE INCREASING IMPORTANCE OF UNDULANT FEVER*

EVERT A. BANCKER, JR., M.D.
Atlanta

Undulant fever is becoming an important clinical entity, but it has not yet been given the recognition it deserves. It seems timely, therefore, to present this paper in the hope that realization of the increasing importance of this disease will lead to its control and prevention. The statistics contained herein are based upon a review of the available literature and a study of the clinical records of thirty-four of the thirty-nine cases of undulant fever which occurred in Georgia during 1928.

Definition and Description

Undulant fever has been defined by Osler[1] as "a specific fever, caused by the Micrococcus Melitensis, characterized by undulatory pyrexial relapses, profuse sweats, rheumatic pains, arthritis, and an enlarged spleen." From the localities in which the disease was recognized it came to be known as Malta fever, Mediterranean fever, Neapolitan fever, Gibraltar fever and Cyprus fever. The name "undulant fever," originally proposed in 1896 by Captain M. L. Hughes of the British Army Medical Staff, was recommended by the International Congress of Medicine held in London in 1913 and is generally used by English and American writers[2].

Four clinical varieties have been described: the ambulatory, the undulant, the intermittent and the malignant. In the first three types the onset is insidious and the prognosis good. In the malignant type the onset is sudden and the prognosis poor. The majority of cases are of the undulant variety. The best clinical descriptions of this infection have been written by Marston[3], in 1861, Chartress[4], in 1866, and Hughes[5], in 1897. All of these writers called attention to the unique variability in the symptoms and course of the disease.

Etiology

Bruce[6], a London physician stationed on the island of Malta, discovered the etiological agent of the disease in 1887 by isolating the Micrococcus Melitensis (Figure 1) from the spleen of a soldier who had died of an unexplained fever. In honor of Bruce the organism was called Brucella Melitensis. In 1896 Bang[7] found the specific cause of infectious abortion occurring in cattle to be the bacterium now called the Bacillus Abortus (Figure 2). However, in 1918 Alice Evans[8] of the United States Health Service proved that the Micrococcus Melintensis of Bruce and the Bacillus Abortus of Bang were so closely related that they could not be distinguished by their morphologic, cultural, biochemic, serologic, or pathogenic characteristics, and, in 1929, Meyer and Shaw[9] proposed that the generic name "Brucella" should include organisms of Malta fever and contagious abortions. That name met with general approval in the United States and has been used by many foreign investigators.

Bacteriology

The infecting organisms of undulant fever are minute rods with many coccoid cells. They are Gram negative, non-motile, and do not form spores nor liquefy gelatin. They may be acclimated to aerobic conditions. Once the bacilli have been grown they are very resistent; the caprine variety, for example, will live for three months in dust and one

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

month in fresh or salt water. McAlpine and Slanetz[10] have shown that the growth of the bovine strains of Brucella Abortus may be markedly accelerated by placing the inoculated plates in a medium of ten per cent carbon dioxide. On the other hand, ten per cent carbon dioxide had a slight inhibitory action on the growth of the human and porcine strains of Brucella Abortus and the Micrococcus Melintensis. The same authors showed that Brucella Abortus of bovine origin utilizes very little or no glucose in its metabolic activity, while Brucella Abortus of porcine and human origin and Micrococcus Melitensis consumed from four to eighteen per cent glucose for metabolic energy.

In 1897 Wright and Smith[11] demonstrated specific agglutinins against Micrococcus Melitensis in the serum of patients and applied agglutination principles to the diagnosis of the disease. Using this agglutination principle, Alice Evans[12], in 1925, performed the agglutinin-absorption tests with sixty-eight strains of Brucella Melitensis and showed that the species may be differentiated into eight serologic groups. Three of these groups included only one strain each. The majority of bovine and porcine strains fell into one large group which was designated as the variety abortus. Five human strains were of this variety. Another group containing twelve strains was called melitensis A, while a smaller group was called melitensis B. Other groups were called para-melitensis and para-abortus. Simple agglutination tests cannot distinguish the varieties of Brucella Melitensis.

Mode of Infection

This disease is usually contracted by drinkink infected cow's milk. In the European countries where goat's milk is used abundantly instead of cow's milk, the disease is contracted by drinking infected goat's milk and eating dairy products made from infected milk.

Infection cannot take place through the unbroken skin, but the mere prick of a needle furnishes a sufficient portal of entry. Farmers, dairymen, veterinarians and stablemen frequently contract the disease by coming in contact with the excreta of infected animals. The following animals are the most common to harbor the infection—the cow, goat, hog, horse, mule and sheep. Butchers and packing house employees are exposed to the disease by handling infected meat. Laboratory workers frequently contract the disease by handling cultures of the organism, even though great care may be taken by them to avoid infection. I believe that this disease may be transmitted in the same manner in which typhoid fever is spread—by food, fingers, flies, fomites and feces. The Brucella Melitensis has been recovered from both urine and stools of infected patients. As the organisms have been cultured from dust it is quite possible that the disease may be contracted by inhalation, though there is no proved case on record at the present time.

Diagnosis

Undulant fever should be suspected in any patient with an unexplained fever. The presumptive diagnosis depends upon the history of the occupation and habits of the patient, the history of frequent abortions in the herd of cattle or goats supplying milk to the patient, and the existence of an irregular, undulating type of fever with possibly an enlarged spleen. When one case of undulant fever develops in a community other cases usually occur. The leukocyte count characteristically shows a leukopenia with an increase of mononuclear leukocytes, usually above forty per cent, and a corresponding decrease of polymorphonuclear leukocytes. A positive diagnosis of undulant fever may be made if the Brucella organism is isolated from the blood, urine, feces, or sweat. The same is true of the agglutination test for undulant fever is positive with a titre of 1:100 or above, providing the Widal test is negative and the agglutination test with Bacterium tularense is negative or positive only in a low titre. In 1924 Oliver and Masot[13] described a cutaneous test for the diagnosis of this disease. It consisted of the injection of .1—.05 c.c. of a filtrate of Brucella Melitensis into the skin. In positive cases there appeared at the site of injection from six to twenty-four hours later a painful, localized edema and redness about four centimeters in diameter. De Fermo[14], in 1927, performed this test

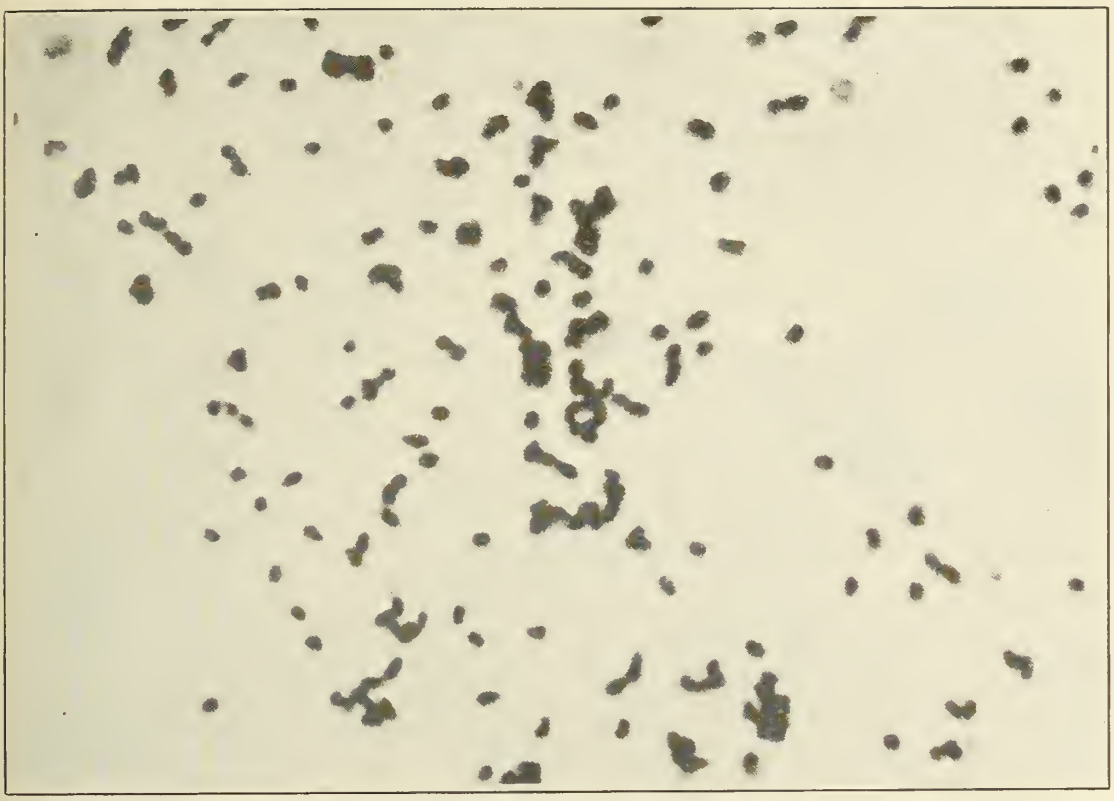


Figure I. B. Abortus. (Hygienic Lab. Bull. No. 143).

upon five patients known to have undulant fever, eight normal persons, and one hundred twenty-five patients with various other diseases. In the five patients with undulant fever there appeared within twelve hours at the site of injection a raised, red, painful infiltration about five centimeters in diameter, which reached its intensity in forty-eight hours and subsided ten days later. In the other one hundred thirty-three patients the test proved negative.

Undulant fever may be differentiated from malaria by the isolation of the Brucella organism, by the specific undulant fever agglutination test, the absence of malarial parasites in the blood smear, and the therapeutic test with quinine. From typhoid and paratyphoid it may be differentiated by a negative Widal test, the presence of joint pains, and the absence of rose spots and a stuporous condition, both of which occur in typhoid. In distinguishing undulant fever from pulmonary tuberculosis and the early stages of acute miliary tuberculosis, the physical examination, the failure to find old foci, the negative Roentgen findings, the negative sputum examination, and the course of the fever are of aid. In acute rheumatic fever the onset is sudden; there is a leukocytosis; the joint symptoms appear at the onset; there are no afebrile periods; and the condition usually yields to salicylates. The typhoid type of tularemia may be confused with undulant fever. In tularemia there is leukocytosis, a specific agglutination test with Bacterium tularense, or recovery of the Bacterium tularense from guinea pigs inoculated with the blood of the patient. A history of having dressed or dissected a wild rabbit or of being tick-bitten or fly-bitten is suggestive of tularemia. Human tularemia serums may show cross-agglutination of Brucella Melitensis and the variety abortus. Of 570 human serums tested by Francis[15] 129 showed such agglutination, while 441 failed even in a dilution of 1:10. As a rule the tularemia serum will agglutinate Bacterium tularense in a much higher dilution and much more rapidly than it will agglutinate Brucella Melitensis or abortus. Undulant fever may be differentiated from influenza by the insidious onset, the longer duration of the disease, the palpable

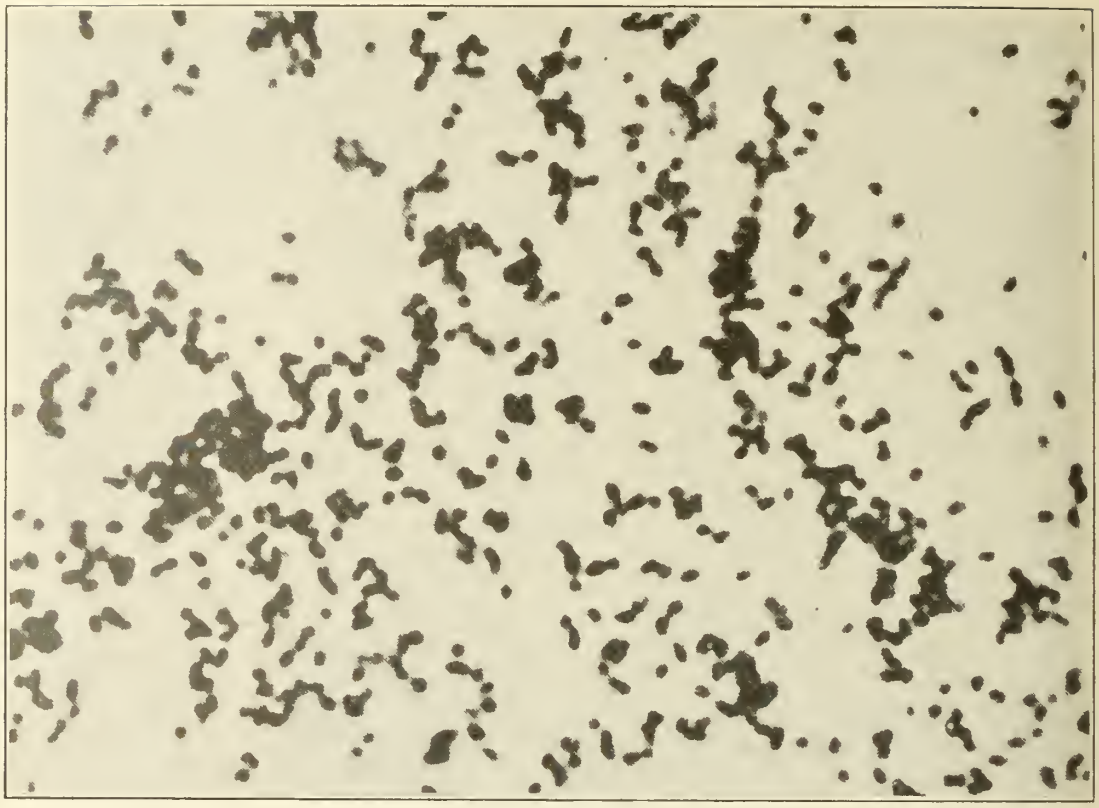


Figure 11. B. Melitensis. (Hygienic Lab. Bull. No. 143).

spleen, the positive blood culture, the specific agglutination test, and the mononuclear leukocytosis, all of which are present in undulant fever. Subacute pyogenic infections are very difficult to distinguish clinically from undulant fever. The chief points in differentiation are the positive blood culture for undulant fever, the specific undulant fever agglutination test, the absence of embolic phenomena, and possibly the presence of an enlarged spleen. In typhus fever there is a sudden onset, a characteristic rash, a positive Weil-Felix test, and a fever lasting two weeks which terminates by crisis. (Figure 3) shows a differential diagnostic chart.

Treatment

The treatment of undulant fever is the treatment of a mild septicemia. As there is no specific therapy, the treatment must be purely symptomatic except for those patients who do not seem to be able to build up their own immunity. For such cases I recommend a vaccine containing one billion killed Brucella Melitensis organisms to the cubic centimeter, which should be given subcutaneously at weekly intervals beginning with .25 c.c. and increasing the dose .25 c.c. at each dose for fifteen doses. Aurrichio[16] used Brucella Abortus vaccine in fifteen cases and reported favorable results in every case. Khaled[17] treated three cases with abortus vaccine and reported favorable results. The author has used vaccine in one case with excellent results. Vaccine should not be used in the acute cases with high temperature and pulse, as it would prove harmful. Russ and Martin[18] and also Todd[19], have used mercurochrome-220 soluble intravenously with varying success. Izar and Mastrojene[20], in 1927, discovered that acriflavine dyes had a certain bactericidal action on Brucella Melitensis in vitro. They administered .01 grams of acriflavine hydrochloride per kilogram of body weight. Three injections one week apart gave favorable results. Other authors have used the acriflavine dyes with no influence on the termination of the disease. The diet should be of the high caloric type, combined with a high purine diet during convalescence to overcome the mild secondary anemia which usually attends

	INCUBATION PERIOD	HEADACHE	NIGHT SWEATS	GENERAL PAIN	ARTHRITIS	TYPE OF TEMPERATURE	PALPABLE SPLEEN	PALPABLE LIVER	SKIN LESIONS	AGGLUTINATION TEST	BLOOD CULTURES	W.B.C.	DIFFERENTIAL [illegible]	SPECIAL TESTS	[illegible]	SPECIFICITY of TREATMENT
UNDULANT FEVER	15 Days	Yes	Profuse	[illegible]	Yes	3 Weeks Pyrexia [illegible]	Yes	±	±	Specific 1:100 [illegible]	Positive 5%	Leucopenia	[illegible]	[illegible]	[illegible]	Symptomatic plus Vaccine therapy
TYPHOID GROUP	10-14 Days	Yes	No	At Onset	[illegible]	Constant 6 Weeks Elevation	[illegible]	[illegible]	[illegible]	Widal Specific	[illegible]	Leucopenia	Increase [illegible]	[illegible]	8 Weeks	Symptomatic
MALARIA	14 Days	Moderate Quinine Relieves	Follow Chills	No	No	Period	Yes	No	No	No	Rarely done [illegible]	Normal	Increase [illegible]	[illegible] Parasite	Indefinite	Quinine Relieves Attacks
TYPHUS	7-14 Days	Yes	No	No	No	Constant 7 Weeks Elevation	No	No	Dull Red Macular Eruption	Weil Felix Reaction	Negative	[illegible]	[illegible]	[illegible]	14 Days Crisis	Symptomatic
TULAREMIA	2-5 Days	Yes	Yes	[illegible]	[illegible]	Intermittent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Symptomatic
MILIARY TUBERCULOSIS	Unknown	Rare	Yes	No	No	Continuous	No	No	[illegible]	No	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
POLY-ARTHRITIS	Unknown	No	Yes	In Joints	Constant	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
INFLUENZA	2-7 Days	Yes	Yes	Yes	Rare	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Normal	None	3-6 Days	Symptomatic
SUBACUTE BACTERIAL ENDOCARDITIS	Unknown	No	No	No	Rare	[illegible]	Rare	Rare	Petechia	N	±	[illegible]	Increase Polys	None	Indefinite	None. Vaccines [illegible]
SEPTICEMIA	Unknown	±	Yes	No	Rare	[illegible]	[illegible]	[illegible]	[illegible]	No	Positive	Leucocytosis	[illegible]	[illegible]	[illegible]	None
PNEUMONIA	Unknown	Yes	Yes	No	No	Constant 7 Day Elevation	No	No	Herpes	For Types	±	Leucocytosis	[illegible]	[illegible]	[illegible] Days	None
HODGKIN'S DISEASE	Unknown	No	No	No	No	Relapsing Type	Yes	Yes	Bronzing	No	No	[illegible]	[illegible]	[illegible]	[illegible] Weeks to 2 Years	None

Figure III. Differential diagnostic chart.

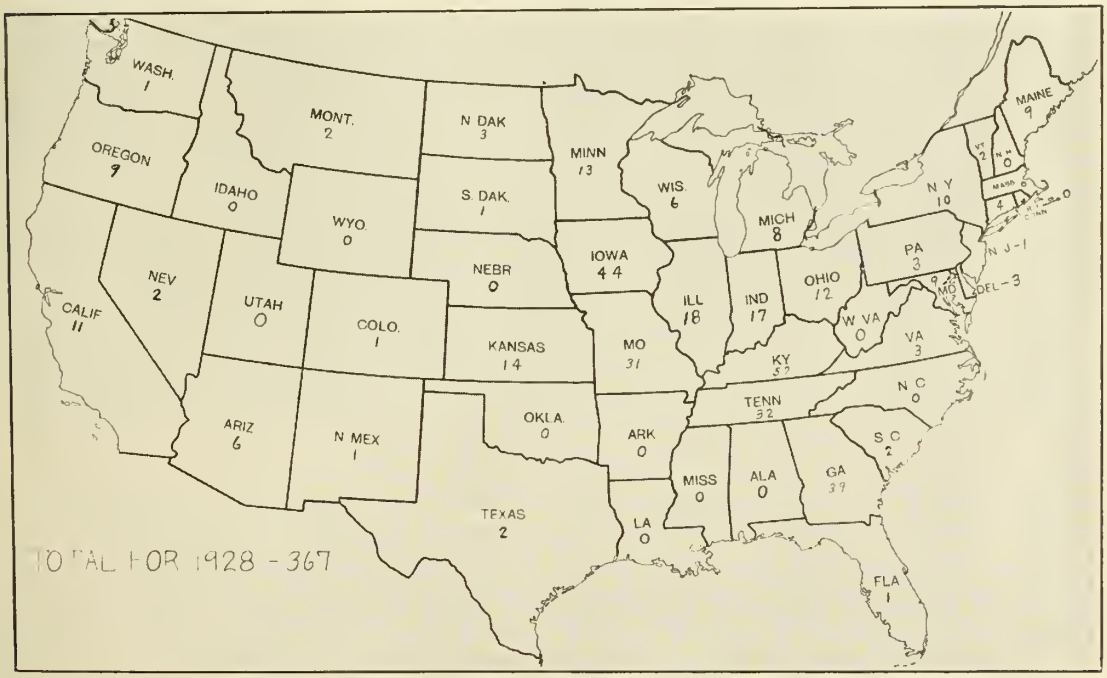


Figure IV. Undulant fever in United States.

the disease. The patient should be kept in there is prostration, but many patients feel bed if the temperature is over 99 degrees or if better in the open air if their condition will

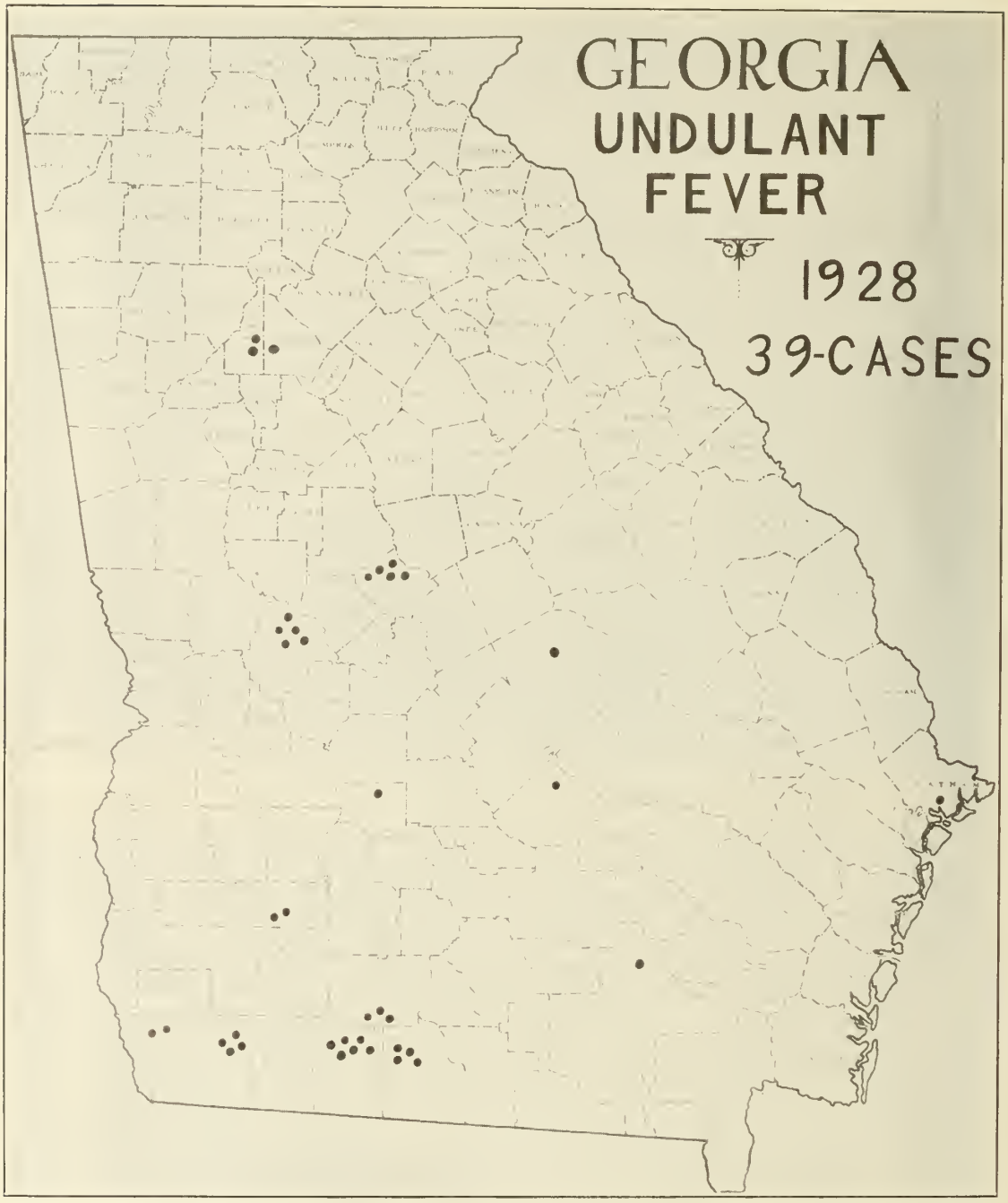


Figure V. Undulant fever in Georgia.

permit it. Moderate exercise is beneficial during convalescence.

Complications

Arthritis is the most common complication of undulant fever and is accompanied by a serous effusion into the synovial membrane. The infecting organisms may frequently be recovered from the affected joints, but suppuration of the joints is rare. Baker[21] reported a patient with a synovial effusion which occurred with clock-like regularity. The Brucella Melitensis was recovered from the blood, the urine, and the effusion in the knee joint. Periostitis occasionally complicates this disease. A case is reported by Cuatrecasas and Tornel[22] in which the patient suffered several spontaneous, complete costal fractures during the course of the disease. Epistaxis often accompanies undulant fever and contributes to the secondary anemia al-

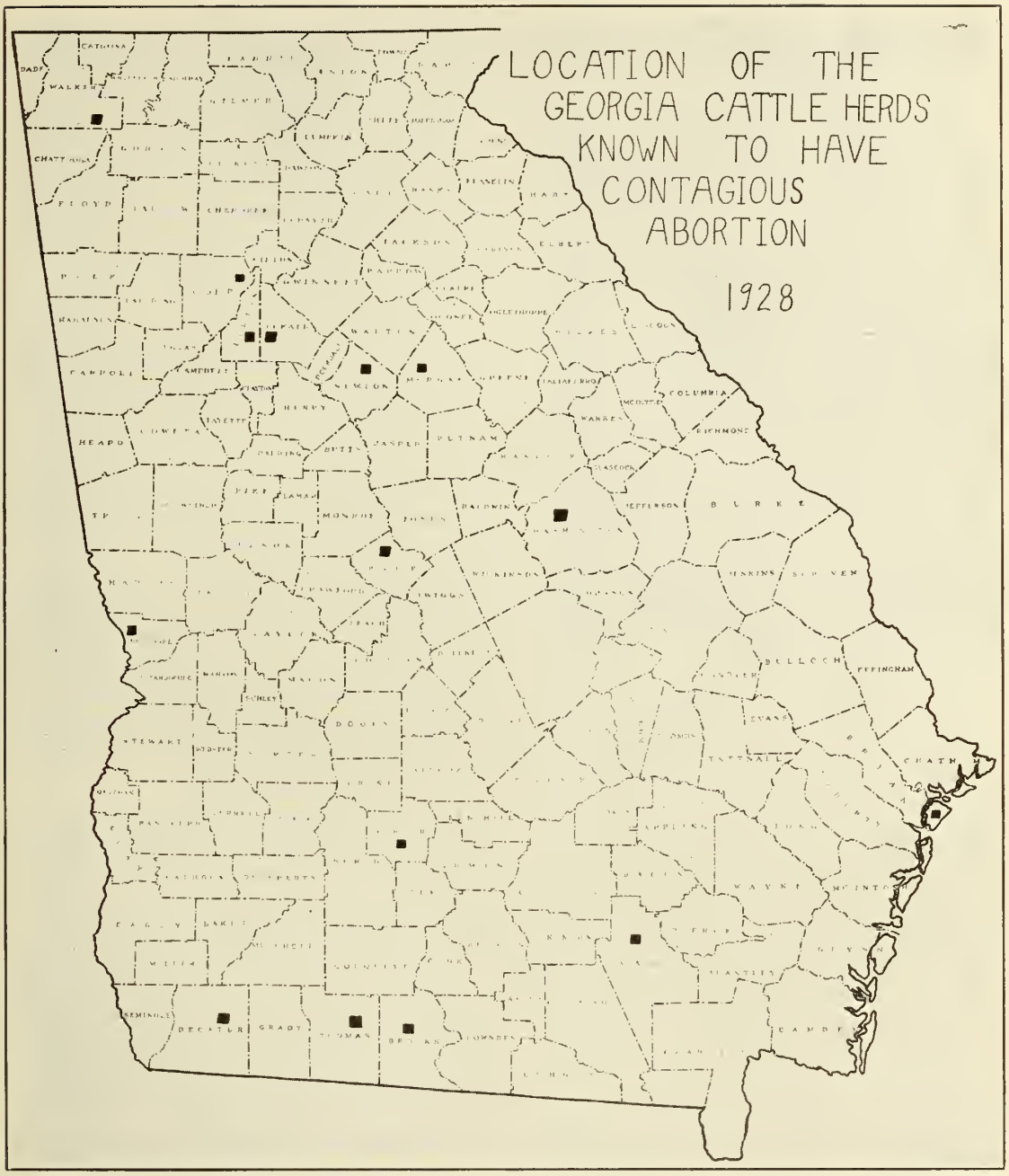


Figure VI. Reacting cattle herds of Georgia.

ready present. Orchitis is the next most common complication, but it usually lasts only three or four days and produces no permanent damage. Mastitis is sometimes seen in female patients. Bronchitis occurs in many cases and is usually confined to the lung bases. Pleurisy occasionally develops and is considered a grave complication. Pneumonia, the most feared complication, is usually fatal.

The chronic cases of undulant fever develop an alarming complication of nervousness which seems to be out of all proportion to the severity of the clinical condition. Whether this is due to the long period of illness or to cerebral disease caused by the organism is not definitely known.

Prognosis

The prognosis in most cases is good. The ambulatory and intermittent types of cases recover unless a fatal complication occurs. The acute malignant cases die because of an overwhelming infection and a low resistance

of the patients. The mortality of the disease is given as two per cent.

Pathology

The pathology of this disease is a congestion and hyperplasia of the lymphoid structures of the body, notably the spleen, liver and mesenteric glands. In the majority of cases the spleen is enlarged and firm. Section of the spleen shows it to be fibrous, but the splenic pulp is not increased. Although the liver is congested in many cases, it is not always enlarged. The mesenteric glands are usually enlarged and inflamed, but the Peyer's patches of the intestines and the intestinal mucosa show only a lymphoid hyperplasia and congestion. There is a tendency for pneumonia to complicate this disease and at autopsy these cases show a consolidation of the lungs. The blood generally shows a slight secondary anemia, but there may be a marked anemia if the disease is of long standing or the infection severe.

Preventive Measures

1. Georgia was the first state to pass legislation concerning contagious abortion in cattle. In 1910 a statute was enacted prohibiting cattle from being brought into the state without first being tested for contagious abortion.

2. The cattle, goat, and hog herds of each state should be tested for contagious abortion, and the animals found to react should be isolated from the herd until they are incapable of passing on the infection.

3. Preventive inoculation should be done of all persons engaged in the care of cattle, hogs, goats, and horses, and of all packing-house employees and laboratory workers before exposure to the infection. This method has been successfully tried by Lentz[23] in Germany.

4. All state laboratories should do the agglutination test for undulant fever upon all negative Widal and Wassermann specimens, and those found to be positive for undulant fever should be confirmed clinically.

5. Undulant fever should be made a reportable disease in all of the states.

6. In communities where cases of undulant fever have been diagnosed, all milk should be Pasteurized. To kill the Brucella organisms it is necessary to keep the milk at 142 degrees Fahrenheit for fifteen minutes[24].

Distribution of Undulant Fever

Figure 4 shows the distribution of undulant fever occurring in the United States during 1928. These figures were obtained from the United States Public Health Service and verified by reports from the individual state boards of health. The disease is not listed as a reportable disease in all of the states, but in spite of this fact, the state boards of health usually know of the cases diagnosed in their domain. It is of interest to note that over sixty-seven per cent of the cases were reported by eight states; namely, Kentucky, Iowa, Georgia, Tennessee, Missouri, Illinois, Indiana, and Kansas. Practically all of these states are noted for their cattle and hog industries and comparatively few goats are to be found in these states. In connection with the distribution of this disease throughout the United States, I should mention the apparent increase in its incidence. In 1927 only 112 cases occurred in the United States, according to Kavanaugh[25]. A total of 367 cases are shown here for 1928.

The distribution of the thirty-nine cases of undulant fever which occurred in Georgia during 1928 is shown in Figure 5. The only definite point to be made here is that most of the cases occurred in the southern part of Georgia where greater numbers of cattle and hogs are to be found, as may be seen in Figure 6. Five cases occurred in 1927 and were reported by Ragan[26].

Clinical Statistics of the Cases in Georgia in 1928

Only thirty-four records of the thirty-nine cases occurring in Georgia during 1928 were available for study. The following facts were apparent: Nineteen patients contracted the disease by ingestion of raw cow's milk. In eleven cases the source of infection was unknown. Two patients contracted the disease from contact with infected cows, while one patient dressed a sore upon a horse's head and became infected. There were twenty-six male patients in the series and eight female patients. The age incidence reached its peak in the third decade. Farmers, members of farming households, veterinarians, and pack-

ing-house workers comprised thirty-three of the thirty-four cases studied. All cases had initial symptoms of malaise, fever, chills and sweats. The average temperature range was from 98 degrees to 104 degrees, while the average pulse range was from 80 to 100 per minute. Twenty patients had one or more afebrile periods during the course of the disease. Nineteen cases presented palpable spleens. The majority of the cases had a leukocyte count below 7,500. The average red blood count was 4,000,000 cells. Twenty-two cases were caused by Brucella Abortus and three cases by Brucella Melitensis, while the definite etiologic agent in nine cases was not definitely determined. All of the patients' blood serums gave agglutination titres of 1:150 or higher, with the exception of two, which exhibited titres of 1:80. The average duration of the disease was from two to four months. Five of the patients are still suffering from the disease. The mortality rate in Georgia in 1928 was seven per cent, as three of the thirty-nine patients died of the disease.

Conclusions

1. The incidence of undulant fever is increasing in the United States, and it should, therefore, be made a reportable disease in all states.

2. A serum agglutination test of titre 1:100 is presumptive evidence of undulant fever if the patient's blood does not agglutinate Bacterium tularense in a higher dilution.

3. When one case of undulant fever develops in a community, other cases usually occur.

4. A serum agglutination test and blood culture for undulant fever should be done upon all febrile patients in whom the diagnosis has not been established.

5. All workers with live or dead cattle, hogs, goats, horses, or sheep should be vaccinated against undulant fever.

Summary

1. A discussion of undulant fever has been given with emphasis on the clinical phase and the prevention of the disease.

2. Three hundred and sixty-seven cases of undulant fever occurring in the United States during 1928 have been recorded.

3. Data concerning thirty-four of the thirty-nine cases of undulant fever occurring in Georgia during 1928 have been collected and correlated.

The author wishes to acknowledge his indebtedness to Mr. T. F. Sellers, of the Georgia State Board of Health and to those Georgia Physicians who so kindly filled out the undulant fever questionnaire which I sent them.

1. Osler, William: The Principles and Practice of Medicine, Eighth Edition, p. 130.
2. London Letters: A. M. A., 90: 556, 1928.
3. Marston, J. A.: Army (British) Med. Reports, 3:286, 1861.
4. Chartres, J. S.: Army (British) Med. Reports, 527, 1866.
5. Hughes, M. L.: Laucet, II, 1896.
6. Bruce, D.: Practitioner, London, 39:161, 1887.
7. Bang, B.: Zeit. f. Thiermed., Jena, 1:241, 1897.
8. Evans, Alice: Jour. Infect. Dis., 22:580, 1918.
9. Meyer, K. F. and Shaw, E. B.: A comparison of the morphologic, cultural, and biochemical characterictics of B. abortus and B. Melitensis. Studies on the genus Brucella Nov. gen. 1. J. Infect. Dis., 27, 173-184.
10. McAlpine, James G. and Slanetz, Charles A.: Studies on the metabolism of the abortus-melitensis group, Jour. Infect. Dis., 42:1, 66.
11. Wright, A. E. and Smith, F.: Lancet, 1:656, 897.
12. Evans, Alice: Studies on Brucella (Alkaligenes) Melitensis, Hygienic Laboratory Bulletin, No. 143, 1925.
13. Oliver, D. and Masot, M.: On the diagnosis of Malta fever by the intradermal reaction, Marseille Med., 61: 1206-1211, 1924.
14. De Fermo, Caesare: Malta Fever, Gazette degli Ospedali e delle Cliniche, Milan, 48:865, Sept. 11, 1927.
15. Francis, Edward: Tularemia, A. M. A., 91:1155, 1928.
16. Auricchio, Luigo: Recherches sur les affinites du B. abortus et du B. melitensis. Essais d'immunotherapie dans l'infection a melitensis chez l'enfant. La Pediatria, 32, (Jan. 15, 1924). Abs. in Arch. l'Inst. Pasteur de Tunis, 13, 135-137.
17. Khaled, Z.: A comparitive bacteriological study of bovine abortion and undulant fever. J. Hyg., Cambridge, Eng., 22, 335-342.
18. Ross, G. R., and Martin, A. P.: J. Trop. Med. 30: 165-171 (July 1), 1927.
19. Todd, M. L.: Mil. Surgeon, 61: 34-5 (July), 1927.
20. Izar, G., and Mastrojeni, G.: Boll. Soc. ital. di biol, sper. 1: 743-745, Nov.-Dec., 1926; Riforma Med. 43: 100, Jan. 31, 1927.
21. Baker, B. M.: Intermittent Hydrarthrosis as Complication of Malta Fever. J. A. M. A., 91: 52, July, 1928.
22. Cuatrecasas, J. and Tornel, L. Garcia: Spontaneous Fractures in Undulant Fever, Archives de Medicina, Cirugia y Espec., Madrid, 28:669, (May 26), 1928.
23. Lentz,: Preventive inoculation in the province of Brandenberg and in Berlin, Deutsche tierarzth. Wchnschr., 36: 57, (Jan. 28), 1928.
24. Carpenter, C. M. and Book, R.: Am. J. Pub. Hea., 18:743, 1928.
25. Kavanaugh, Chas. N.: The Epidemiology of Undulant Fever. Southern M. J., 22:290, March, 1929.
26. Ragan, W. E.: Malta Fever. J. M. A. Ga., 17:106, (March), 1928.

DISCUSSION ON PAPER OF DR. BANCKER

Dr. Paul Eaton, Augusta: This paper has been well titled, well prepared and well presented. I wish to call your attention to the similarity between all these conditions, tularemia, undulant fever, malta fever, and pestis minor, or the little plague, which agrees in every particular respect with these cases. This is only a theoretical discussion, but plague is a disease of anthropoids and rodents. Imagine an organism which is as deadly as plague transferred to an animal which is not so susceptible. What would happen? It would lose some of its characteristics, and it might retain others. Tularemia is a disease which occurs quite frequently and from the laboratory we have not much to hope for,

for the B. tularense and the Brucella Abortus cross agglutinate so badly. The B. tularense occasionally gives a higher titre of agglutination and if the patient has been dissecting rabbits you know he has tularemia. If a farmer has been delivering an aborting cow, then you will get the Brucella Abortus in most instances. I have not seen many cases of this type. It is recorded that Alice Evans has had the disease for five years. Lake was sick for three years with it. These conditions have resisted all types of treatment, particularly the autogenous vaccines.

There was only one statement in the paper that I will take the liberty to disagree with. The essayist says the organism will not pass through the unbroken skin. If you ever examine your hands after scrubbing them surgically with a binocular microscope you will see abrasions that you have been unaware of. Every laboratory worker who has worked with B. tularense has become infected. The organisms certainly pass through the skin—don't get them on your fingers.

Dr. Allen H. Bunce, Atlanta: I believe the Association owes a debt of gratitude to Dr. Bancker for his study of undulant fever in Georgia. No doubt we have been seeing these cases for some time and calling them something else. Only a short time ago I was talking with Dr. McElveen and he said he had a case last year, and did not know what it was. I told him he had nothing on us, for we did not know what our first case was. The disease is on the increase. Last year Cavanaugh of the Kentucky State Board of Health was able to collect only ninety-three cases in the United States, but Dr. Bancker has collected 367, as he will show you a little later. Our State veterinarian tells me that contagious abortion is very prevalent in Georgia, although Georgia has the earliest law designed to prevent contagious abortion. If that be true, and if the people of Georgia drink much milk we may expect undulant fever to increase. Therein lies the most important point in Dr. Bancker's paper, i. e., in calling our attention to the prevalence of the disease so that we may take proper measures to control the further spreading of the disease. Our State Veterinarian states that our law covers the subject well. He states that if he has the backing of the medical profession it will be of much assistance in enforcing the law. It had been previously contended that the Brucella Abortus of contagious abortion in cattle could not be transmitted to man.

In referenec to the diagnosis, I have not seen anything that will help us. In one case after seeing the patient probably the third time in consultation I found a relatively high lymphocytosis, which I could not explain. Having recently reviewed an article on the differentiation of tropical diseases, I recalled that I saw in that something on lymphocytosis, and stated that I thought it was a case of undulant fever. In the other case Dr. Bancker made the diagnosis about six months after I saw the patient.

In reference to cross agglutination, I beg to disagree with the previous speaker, although it is not my duty to discuss his discussion. Tularemia can be differentiated from undulant fever. There is a difference in the agglutination titre just as we get a higher titre in specific types of the meningococcus. That is the only way I know of to make a diagnosis. If we have a patient with a fever which we can not diagnose, we resort to blood cultures and agglutination tests. I have not seen a thing in the physical examination that is of any assistance.

In reference to the treatment, it seems to me logical to suppose that in a low grade infection extending over a long period of time, if we can increase the agglutination titre from 640 to 1,300 or so with vaccines we will help to cure the patient. I do not think vaccines should be used indiscriminately.

T. F. Sellers, Atlanta: The clinical symptoms of undulant fever are so variable that accurate diagnosis can only be made by the agglutination test. About twenty of the cases referred to in Dr. Bancker's paper were thus diagnosed at the State Board of Health Laboratory. In several instances we have isolated the causative organism, Br. Abortus from blood cultures. Four of these strains were sent to Dr. J. C. McAlpine of Storrs Agricultural Experiment Station, Storrs, Connecticut, for typing. Dr. McAlpine reported that three of these strains were the porcine type, while one was an intermediate type resembling true Br. Melitensis, or the caprine type. None of them proved to be the bovine type. This seems somewhat inconsistent with the theory that undulant fever in man is contracted by drinking the milk of cows infected with contagious abortion. However, McAlpine and also Evans suggest that cows may become infected with the porcine type and thus transmit the porcine type to man.

The State Board of Health Laboratory is now making more or less routine tests for undulant fever, Brill's typhus and tularemia on all blood specimens submitted for culture or serological tests, except Wassermann speci-

mens. It is an interesting fact that the majority of those found positive for undulant fever were from cases which were not suspected by the physician. A large percentage of the cases of Brill's typhus and tularemia were also differentially diagnosed by this practice.

The data compiled by Dr. Bancker will be of great value to public health workers, not only in Georgia, but in other states.

Dr. S. T. R. Revell, Louisville: I wish to ask a question. I have had cases in which I could not make a diagnosis, and have in mind several now, in one of which there is a strong probability that the patient may have malta fever. I wish to know how long the agglutination test remains positive, and the rate at which it deteriorates.

Dr. Evert A. Bancker, Jr., Atlanta (closing): There are no definite statistics to tell us exactly how long the agglutination test will remain positive in a given case. The titre has been known to be as high as 1:300 three years after the patient has had the disease. I have not followed the disease long enough to know much about it, but in the cases I have observed the agglutination test has gradually decreased with the passage of time.

AGRANULOCYTOSIS*

Report of Two Cases

J. D. GRAY, M.D.
Augusta

Schultz (1), in 1922, described a number of cases of gangrenous stomatitis associated with an absolute and extreme granulocytic leukopenia. Since then many cases have been reported, mostly by German writers. Lovett (2) was the first in America to report a case. Lauter (3) was the first to report a case that recovered. Moore and Wieder (4) were the first in America to report a case that recovered. The first case occurring in a male was reported by Rotter (5). There have been about 125 cases reported up to 1929. Seventy-nine cases are reviewed in this paper. Cases have been reported by Schultz (1), Lovett (2), Lauter (3), Moore and Weider (4), Rotter (5), Friedemann (6), Bantz (7), Petri (8), Elkeles (9), Pelnar (10), Bantz (11), Skiles (12), Pfab (13), Zadek (14), Erhmann and Preuss (15), Schultz and Jacobwitz (16), David (17), Hunter (18), Hill (19), Krumbhaar (20), Cannon (21), Hart (22), Kaslin (23), Ashworth and Maphis (24), Linthicum (25), Finnigan (26), Prendergast (27), Hirsch (28), Friedman (29), Whitehead (30), Stillman (31), Allan (32), Gundrum (33), Dasse (34), Murphey (35), Sachs (36), Dwyer (37), Hueper and O'Connor (38), Thomson (39). There were fifty-nine females, twenty males, fifty-two cases were autopsied.

Report of Two Cases

Through the courtesy of Dr. C. I. Bryans and Dr. M. P. Agee I have the privilege of reporting these cases.

Case 1. A woman, aged 40, entered the University Hospital May 1, 1926, complaining of sore throat, fever, headache, general malaise, and extreme prostration, for past few days. Examination revealed—pulse 122, temperature 102, slight jaundice, extreme ulcerative pharyngitis, cellulitis left side of neck, and greatly enlarged glands in the left parietal region. Blood culture was negative. Coma preceded death, which occurred May 3, 1926. First white blood count 6,700, 98 per cent nononuclear cells, second white blood count, 4,400; third, 2,400; fourth, 3,600. Hemoglobin 75 degrees. No autopsy.

Case 2. A man, aged 34, entered the University Hospital January 6, 1926. For about a week before entering the hospital he had had a cold, with cough, and temperature of 100.6. In the beginning of his illness he had not complained of sore throat, but examination showed that his throat was very red. For two days preceding entrance into the hospital, temperature went to 101 or 102, and he complained of headache and sore throat. Gums were also sore, but they cleared up in about twenty-four hours. Transillumination of sinuses showed a cloudy antrum from which, when irrigated, clear fluid was obtained. On admission the white blood count was 4,500, of which only a few granular cells were found. There were ulceration and necrosis of fauces, tonsils, and soft palate. Slight jaundice was present. Temperature ranged from 103 to 104. His white blood count rapidly dropped to 2,500, then to 2,000, and finally to 200 cells per cubic milimeter. A little while before death his white blood count was 3,000. Seven transfusions were given in thirty hours. Coma did not precede death, which occurred January 10, 1926.

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

(Autopsy limited to abdomen with minimum of vessel severing.)

The body is that of a still warm, very well nourished white male of some 35 years of age, 177.5 cm. long (est.), wt. (est.) 77kg. Bony and muscular development is good. Rigor is marked in the muscles of the face, elsewhere absent. There is a yellow tinge to the skin. An old healed oblique scar is on right side of abdomen. At the right elbow anteriorly there is some bloody suffusion beneath the skin.

Hair is rich, receding from the forehead. Pupils are equal, half contracted. Sclera are yellowish; nose is clean; there are a few areas of ulceration on the lips. On account of the rigidity of the facial muscles the mouth cannot be examined satisfactorily. The neck is thick but not so short, thorax is rather broad and deep; abdomen is in place, about the extremities there is nothing unusual.

Panniculus is well developed and highly colored. Dense adhesions are about the cecum and anterior peritoneal wall at site of scar. Liver lies a little low; otherwise, the viscera are normally disposed. The appendix is absent. The surfaces of the peritoneum are smooth and glistening.

Liver: Enlarged and the consistency is increased. The weight is estimated at 1,700 grams. On section the surface is brownish-red. The lobulations are not distinct. There is evident bile staining.

Gall Bladder: Filled with bile but the ducts are patent.

Spleen: Enlarged and the consistence is as usual. Weight is estimated as 225 grams. On section much blood flows from the cut surface, which has a mottled appearance due to irregular light grayish areas appearing in the background of purplish pulp. These areas do not resemble the Malpighian bodies and the latter are not apparent.

Adrenals: There is nothing unusual.

Kidneys: Unequal in size. The left is small. Weight is estimated at about 60 grams. There is marked irregularity in the lobulation. Other than the small amount of parenchyma there is nothing unusual on section. The right kidney is very much increased in size. Weight is estimated at 350 grams. The consistence is normal. The capsule strips readily. There is still evidence of lobulation. On section the cortex and medulla are both proportionately increased in size. The markings are distinct.

Bone Marrow: Of the ribs and vertebra is quite red and appears normal in amount.

Anatomical Diagnosis

Splenomegaly.

Jaundice.

Ulceration of lips.

Congenital malformation of left kidney and hypertrophy of right.

Microscopical Examination

Liver: The liver cells are swollen and cloudy. There is some bile imbibition in the cells about the centers of the lobules. There is also a slight excess of visible fat in some of the cells. The connective tissue of the portal canal is infiltrated with a few lymphocytes.

Spleen: There are irregular areas throughout the section where the sinuses are congested; here the pulp is small in amount. In other areas the pulp is increased and the sinuses are barely apparent and in these areas there is some cellular detritus. The lymph nodules are rather small.

Adrenal: The reticular zone and medulla are irregularly infiltrated with lymphocytes.

The Right Kidney: There is some increase in the number of nuclei in the glomeruli and in Bowman's capsule. In the capsular space of some glomeruli there is some albuminous material. The epithelium of the convoluted tubules is cloudy. Most of the tubules contain some albuminous material. In the section from the left kidney there is an occasional linear area of fibrosis along the arterioles which is heavily infiltrated with lymphocytes. There is also infiltration of the connective tissue about the arcuate vessels with lymphocytes; otherwise, this section is similar to the right kidney.

Bone Marrow: From a vertebra and from the rib show well defined islands of crythrogenesis. No myelocytes of polymorphonuclear leukocytes are seen.

Etiology

Agranulocytosis occurs most frequently in females of middle age; average forty-three years. Average age of the male patients was thirty-one years. The youngest patient was four and a half years; the oldest, seventy-four years.

No particular significance can be attached to the great variety of bacteria found. Vincent's organisms—both the spirillum and the fusiform bacillus—streptococcus, staphylococcus, and pneumonococcus were found in smears from the lesions in a large number of cases. Blood culture was positive in about ten per cent of cases; streptococcus, staphylococcus colon bacillus. Friedlanders Bacillus and bacillus pyocyaneus were grown in these cultures.

The work of Lovett (2) is of particular interest. The B. pyocyaneus was cultivated

from the lesions of the throat, vagina and spleen after death. Guinea pigs were injected with both cultures. In one animal, the leukocytes fell to 2,000, and there was a decrease in the granular cells from forty-eight to twenty-nine per cent, twenty-four hours later. A leukocyte destroying ferment in cultures of B. pyocyaneus has previously been found in 1899 by Gheorgiewski (40). These experiments would indicate that the B. pyocyneus might bear some relationship to the disease. The idea is suggested that the toxin obtained by the growth of B. pyocyaneus might be of some use in the treatment of leukemia and tumors of the myeloid type.

Piette (41) was unable to obtain a positive blood culture, but did find bacilli resembling the B. pyocyaneus in lesions in the liver, spleen, kidney, stomach, and suprarenal glands.

Hill (19) reports two cases following extraction of teeth. Blood counts were made before the teeth were removed and found normal. In both cases the teeth were vital. Hunter's (18) case followed injury which caused fracture of the tibia. One case of Cannon (21) followed the extraction of a tooth. The thought suggests itself that in these cases, after injury to the bone, the noxious agent might more readily gain entrance to the bone marrow.

Syphilis was present in a few cases.

Symptoms

Most of the patients were in good health before the onset of the disease. The onset was sudden in the majority of cases. It was marked by a high fever, 101-105, sore throat, general malaise and dysphagia. In a few cases a chill was the initial symptom. A few patients had extreme weakness and sore throat for a short time before the fever began. Headache was common. Exhaustion was an early symptom and coma often preceded death. Slight jaundice was present in the majority of cases and is thought to be due to injury to the reticulo-endothelial system. Hemorrhage was not a common feature. In a few cases there were cutaneous petechial hemorrhages, and visceral petechial hermorrhages were also found at autopsy. Large hemorrhages were found in the bone marrow and lungs in two cases; in the retina, stomach, and small intestines in one case. Regional lymph gland enlargement was present in about one-half of the cases. In no case was the enlargement very marked, nor was there suppuration.

The oral cavity was involved in the inflammatory process in all cases. There were usually one or more dirty, ragged, yellowish, rapidly spreading ulcers that soon became necrotic. The lesions were most frequently found on the tonsils, throat, and gums. In the cases that followed extraction of teeth the gums were primarily involved, and the lesion was limited to the gums in one case. Lesions were found frequently in the anus, vagina, and cervix, and occasionally in the larynx and esophagus. The tonsillar region was injected and quite often the exudate was mistaken for a diphtheritic membrane. Often the membrane was attached to a non-ulcerated surface. Edema of the pharynx was a variable finding. Necrosis and sloughing of the ulcers were an early finding. In a few cases there was no definite demarcation of the involved area from the normal tissue. In the majority of cases there was no inflammatory reaction around the necrosis. In sections there was some slight lymphocytic, endothelial and plasmacell reaction, but there were no polymorphonuclear cells seen.

The spleen and liver were palpable in most of the cases.

The most striking thing found was the blood count. The white blood count was reduced, sometime during the disease, in all cases. All the white cells were affected, but the granular cells suffered much more than the others. The average white blood count was 1,200 per cubic millimeter; the lowest was 100 per cubic millimeter. Usually there was a gradual decrease in the number of cells. The lymphocytes varied from 60 per cent to 100 per cent and the granular cells from 0 to 6 per cent. It is interesting that in a few cases the white blood count increased a little while before death.

The red cells were normal in most cases, but in a few cases there was extreme anemia. A red cell count of 740,000 with a hemoglobin of 15 per cent was the lowest recorded

Hirsch (28). The anemia was occasionally progressive. The platelet count was normal.

There were eleven recoveries—five of them were American cases. One case recovered from the first attack, but died about two years later of the same disease. Pneumonia was responsible for nearly all deaths. Friedman's (6) case recovered from the gangrenous stomatitis and blood picture, but died shortly afterwards with pneumonia.

Pathology

There were ulceration and necrosis of mouth, tonsils, tongue, gums, anus, cervix, and vagina. The spleen and liver were slightly enlarged in most cases. There was a cloudy swelling of the liver with diffuse perivascular lymphocytic infiltration in some places. The capillaries and lymphatics were distended. In the spleen there was an enormous development of the sinus endothelium at the expense of the lymphatic tissue. No polymorphonuclears were seen, the endothelial cells comprising 90 per cent of the splenic substance.

Piette (41) found bacterial emboli in the liver, spleen, kidneys, stomach, and suprarenal glands. Bacteria were seen in the Kupffer's cells and in Bowman's capsule. In the stomach there were superficial areas of necrosis penetrating as deep as the muscularis mucosa. No evidence of inflammatory reaction could be discovered. Reticulo-endothelial cells are increased in the spleen, lymph nodes, bone marrow, and in the circulating blood.

The bone marrow, in the majority of cases, was in the gross, red; it was fatty in a few cases. On microscopic examination the lymphocytes were prominent, but the most striking thing was a great decrease in or absence of granular elements.

Differential Diagnosis

1. Poison—poisons like arsenic, thorium, benzol, and also Roentgen rays may produce an extreme leukopenia. Poisons can usually be excluded by the history. Benzol attacks primarily the granular cells, but the Roentgen rays attacks the granular cells secondary to the lymphocytes.

2. Aleukemic leukemia—these cases have a blood count which is low or below normal, relative lymphocytosis with immature and abnormal lymphoid forms and decrease of the granular cells. These cases usually assume the blood picture of leukemia as the disease progresses. If autopsy is done, lymphoid infiltrations of organs are found.

3. Typhoid fever—in typhoid we have leukopenia, the white cells being sometimes less than 4,000. There is a relative increase of the lymphocytes. Here the slowness of onset, slow pulse and high fever with the other symptoms, and blood culture would be sufficient for a diagnosis.

4. Idiopathic aplastic pernicious anemia—There is a marked reduction of the polymorphonuclears with a relative lymphocytosis. Counts of less than 200 per cubic millimeter have been found. There is, of course, grave anemia. This disease is most common in males between the ages of twenty and forty. Like agranulocytosis, it is rapidly fatal. Apparently selective and direct toxic bone marrow destruction and aplastic insufficiency are the dominating features.

Discussion

"Agranulocytosis" was suggested by Schultz (1). David suggests "Sepsis with Granulocytic Decrease"; Feer, "Sepsis Agranulocytica." Septicemia with extreme agranulocytosis would perhaps be better. Agranulocytic angina has been suggested which would lead one to believe that it is primarily an angina. Is it primarily an angina, or is it primarily a disease of the bone marrow which destroys the greatest power of defense—the polymorphonuclear cells—thereby lowering the resistance to such a degree that a gangrenous stomatitis develops, or is it an overwhelming sepsis with an extreme agranulocytosis?

It is true that an extreme leukopenia can be produced at the expense of the granular elements without angina. A low leukocyte count is often found in extreme sepsis. Miller (42) reports a case of Hodgkin's disease that had been treated with x-ray and several months later developed septicemia caused by the streptococcus viridans—the white cells decreasing to 240 per cubic millimeter.

One case was very interesting in that after treatment with radium for cancer of the prostate the patient developed an extreme leuko-

penia—200 cells per cubic millimeter with 41 per cent polymorphonuclears and developed angina shortly before death.

Whatever the noxious agent, it enters the body by some unknown route, causing a decrease of the granular cells, meeting with no opposition of reaction, multiplies and gives rise to emboli throughout the body. Only the reticulo-endothelial cells of the spleen and liver make any effort to defend the body. The lymphocytes are totally incapable of destroying the infection.

Blood counts were made in a few cases before the disease developed and were normal. It is interesting that three patients were admitted to hospital for other diseases:

1. Fracture of tibia, Hunter (18).
2. Tuberculosis arthritis, Bantz (11).
3. Unexplained jaundice, Ehrmann and Preuss (15).

In infection the bone marrow behaves in one of three ways—(1) it is stimulated, causing a leukocytosis, (2) it is inhibited, causing a leukopenia or (3) there is no reaction, the leukocytes remaining normal. The number of leukocytes that the bone marrow sends into the blood stream depends upon the bacterial toxin and the reaction of the bone marrow to it. It is my opinion this condition is basically sepsis in which there is an extreme inhibition of bone marrow activity.

Treatment

Mercurochrome, diphtheria antitoxin, arsphenamin locally and intravenously, antistreptococcic serum, acridin dyes, alcohol, silver compounds, "yatrencasein," and other disinfectants and local caustics were used without favorable results. Repeated transfusion of blood were used with temporary improvement.

Treatment of the long bones with the x-ray was reported by Friedman (29) with recovery of four cases. These cases showed a prompt and marked improvement in the general condition and feeling, and a crisis-like improvement in the condition of the blood coming on a few hours after the raying. One-twentieth of a skin dose filtered through 0.6 m.m. copper was used. He believes that the X-rays stimulate the formation of new granulocytes in the bone marrow and favor the discharge of such cells retained in the bone marrow.

REFERENCES

(1) Schultz, W.: On Different Throat Affections. Deutsch. Med. Wochenschr. 48: 1495, 1922.
(2) Lovett, R. W.: Agranulocytic Angina. J. A. M. A. 83: 1498-1500 (Nov. 8), 1924.
(3) Lauter: Septic Tonsillitis with Agranulocytosis. Med. Klin. 20: 1324-1326.
(4) Moore, J. A. and Wieder, H. S.; Agranulocytic Angina. J. A. M. A. 85: 512-512, 1925.
(5) Rotter, W.: Pathological Anatomy of Arganulocytic Diseases. Virchow's Arch. 258: 17-36.
(6) Friedemann, U.: About Agranulocytic Angina. Med. Klin. 19: 1357-1359, 1923.
(7) Bantz, R.: Leukemia Conditions with Extreme Leukopenia. Med. Klin. 19: 1667-1669, 1923.
(8) Petri, E.: Intestinal Changed in Agranulocytosis. Deutsch. Med. Wochenschr. 50: 1017-1018.
(9) Elkeles, A.: Agranulocytic Angina. Med. Klin. 20: 1614-1616, 1924.
(10) Pelnar: Casopis lekaruw Ceskych, 63: 1653, 1924. Abst. J. A. M. A. 84: 74, (Jan. 3), 1925.
(11) Bantz, R.: Agranulocytic Angina. Munchen. Med. Wochenschr. 72: 1200-1201, (July) 1925.
(12) Skiles, J. H.: Agranulocytic Angina. J. A. M. A. 84: 364-365, (Jan. 31), 1925.
(13) Pfah, B.: Problem of Agranulocytosis and its Treatment. Wien. klin. Wchnschr. 38: 1302-1303, 1925.
(14) Zadek, I.: The Agranulocytosis Question. Med. Klin. 21: 685-690, 1925.
(15) Ehrmann, R. and Preuss, J.: Leukopenia in Sepsis. Klin. Wchnschr. 4: 267-268, 1925.
(16) Schultz, W. and Jacobwitz, L.: Agranulocytosis. Med. Klin. 21: 1642-1645, (Oct.), 1925.
(17) David, W.: Agranulocytosis. Med. Klin. 21: 1614, 1925.
(18) Hunter, R. J.: Agranulocytic Angina: Report of a Case with Fracture of Tibia. Laryngoscope. 36: 384-352, (May), 1926.
(19) Hill, H. P.: Acute Leukemia and Agranulocytic Angina associated with following removal of teeth. Cal. and West Med. 25: 609-612, (Nov.), 1926.
(20) Krumbhaar, E. B.: Leukmoid Blood Pictures in Various Clinical Conditions. Am. J. Med. Sc. 172: 525, 1926.
(21) Cannon, A. G.: Some Unusual Dermoteses. South. Med. J. 20: 141-147, (Feb.), 1927.
(22) Hart, V. K.: Combined Ludwig's Angina, Agranulocytic Angina, and Septicemia. Laryngoscope. 37: 357-359, 1927.
(23) Kastlin, G. J.: Agranulocytic Angina. Am. J. Med. Sc. 173: 799-813, (June), 1927.
(24) Ashworth, O. O. and Maphis, E. C.: Arganulocytic Angina. Va. Med. Monthly. 54: 237-239, 1927.
(25) Linthicum, F. H.: Pyocyami Stomatitis with Agranulocytic Leukopenia. Cal. and Western Med. 27: 79-80, 1927.
(26) Finnigan, F. R.: Agranulocytic Angina. J. M. A. Missouri. 24: 258-259, 1926.
(27) Prendergast, D.: A case of Agranulocytic Angina. Canad. M. A. J. 17: 446-447, (April), 1927.
(28) Hirsch: Concerning Agranulocytic Angina. Munchen. Med. Wochenschr, 74: 762, 1927.
(29) Friedemann: Dent. Med. Woch. 53: 2193, 1927.
(30) Whitehead, R. C.: Va. Med. Monthly, March. 54: 761-763, 1928.
(31) Stillman, R. G.: Med. Clinics N. A. 12: 805-910, 1928.
(32) Allan, W.: Ann. Int. Med. 2: 542-544, 1928.
(33) Gundrum, L. K.: Agranulocytic Angina: Report of a Case. Arch. Int. Med. 41: 343-345, (March), 1928.
(34) Dasse, H. W.: Agranulocytic Angina. J. A. M. A. 91: 1718-1719, 1928.
(35) Murphey, A. B.:North Western Med. 27: 346-347, 1928.
(36) Sachs, A.: Neb. Med. J. 13: 81-85, 1928.
(37) Dwyer, H. L. and Helwig, H. C.: Am. J. Dis. Chil. 35: 1041-1047, 1928.
(38) Hueper, W. C. and O'Connor, D.: Laryngoscope. 38: 679-686, 1928.
(39) Thompson, J. J.: Laryngoscope. 38: 395-397, 1928.
(40) Gheorgiewski: Ann. de L'Inst. Pesteur. 13: 298.
(41) Piette, E. C.: Histopathology of Agranulocytic Angina. J. A. M. A. 84: 1415-1416, (May 9), 1925.
(42) Miller, H. R.: Med. Clinics N. A. 10: 878.

DISCUSSION ON PAPER OF DR. GRAY

Dr. Roy R. Kracke, Emory University: We have recently had a case of agranulocytosis at Wesley Memorial Hospital in Atlanta, in a woman aged 72, who recovered. The case will be reported in full soon, but I wish to bring out a few of the interesting points.

In one blood culture out of about six that

were made, we found streptococcus hemolyticus. This culture was taken on the day the patient was at her worst. We isolated the same organism from her mouth, from the feces, and also from the various multiple abscesses, which were probably embolic in nature. Here is a case of agranulocytosis which was evidently caused by the streptococcus hemolyticus. I took the organism and inoculated it into various laboratory animals. In some of the animals I produced a mild leukopenia, both relative and absolute. This work approximates very closely, I believe, the work of Beatrice Lovett, who did similar work with B.pyocyaneus. I do not believe that agranulocytosis is due to one organism but to several, the chief ones being streptococcus hemolyticus, B. pyocyaneus, staphylococcus, and so forth. Agranulocytic angina seems to be the response of the body tissues to an unusual type of infecting organism. By that I mean one that instead of producing the customary leukocytic response produces a negative one.

The two cases reported by Dr. Gray are very interesting and are certainly true cases.

Dr. Edgar R. Pund, Augusta: The paper of Dr. Gray is timely. While agranulocytosis is a rare disease, attention should be directed to it, because the diagnosis is made with ease. The mere counting of the white blood cells over a period of a few days will confirm or establish the diagnosis. It is unusual for one physician to observe many cases, and only by the study of reported cases, may conclusions be drawn.

I have had the opportunity to perform autopsies on two cases. One patient was a negro, age 55, the other was white, age 30. The morbid changes in both cases were alike. The post-mortem findings were those that are usually found in intoxication or in sepsis.

In one, the liver was cloudy, with an increase in visible fat; while in the other case, there was necrosis of the liver with an early cirrhosis. The spleen was about twice the normal size, with foci of necrosis in one. In the bone marrow there was little evidence of hematopoiesis of the granular cells.

Dr. James J. Clark, Atlanta: It was my good fortune to attend a meeting of the American Roentgen-ray Society in Washington, and at that time Dr. Fred Hodges, of Richmond, reported a case of agranulocytic angina, with recovery. The case was treated with many small doses of roentgen-ray. Men who are giving radiation to these cases of agranulocytic angina are not claiming cures. If you go through the records of these cases you will see that the patients are very sick. They have many varieties of treatment, drugs and radiotherapy. Many things stand out rather sharply. If we remember the effect of roentgenotherapy in the treatment of several forms of blood disease in which there are very high counts, we know we can reduce the count, for example, in myelogenous leukemia. We also know that the use of the roentgen-ray in stimulating dosage will encourage the bone marrow to put out more granular leukocytes. The first patient of this type that we had at Wesley Memorial Hospital this year died. Her count dropped down to slightly more than one thousand. After she received her first dose of stimulating roentgenotherapy there was a slight rise in the count. The treatment was distributed over the long bones gradually. When she died she had a good percentage of granular leukocytes.

In the second case, the attending physician said there was no use giving radiation except to satisfy the family. The patient was comatose. After the first treatment her count was improved a little. The second day following treatment her count went up to where in a few days she had a leukocytosis with her granular infection. She relapsed several months later and died—radiation was given without response.

What we are trying to determine, is whether such radiation stimulation is worth while. It appears from the reports from Germany and this country that much is accomplished by small doses. The dose should be very small. The patients can be treated with a portable x-ray machine if you wish, or with a dental machine. It is a safe procedure and it seems to have an effect on improving the reaction of the bone marrow to infection.

Dr. J. D. Gray, Augusta (closing): I do not believe that this disease of agranulocytic angina, or agranulocytosis, is a clinical entity. As I said before, I think it is simply sepsis, with a very abnormal reaction of the bone marrow. It would be of great interest to take the streptococcus that was grown from the case that was mentioned and produce a toxin, and see what it would do to leukemia. I have wanted to do that with some organism that was recovered. I had in mind B. pyocyaneus, because we knew of that before. Friedemann reported twenty-two cases, and all patients had died. He started treating them with stimulating doses of roentgen-ray and four recovered. In one case reported in America the roentgen-ray was used without any benefit but, as Friedemann said, some of his patients clamored to be rayed again.

THE EPILEPSIES*

WILLIAM A. SMITH†, M.D.
Atlanta

Epilepsy is recognized today as a syndrome or symptom, consisting usually of sudden periodic convulsive movements, loss of consciousness or both. It is doubtful if any distinction exists between symptomatic and so-called idiopathic epilepsy. Etiologic factors are numerous. The most important factors may be classified as organic disease of the brain, intoxications and circulatory disorders.

We have recently reviewed the records of 400 consecutive cases presenting convulsive seizures as a chief complaint; these patients have all been seen in private practice. Many of the current impressions regarding epilepsy are based on cases as seen in mental hospitals and allied institutions, and a study of cases as ordinarily met in practice may give a different conception of the epilepsies.

Hereditary factors in this group were found to be of little importance. Convulsions had occurred in a parent in only three cases (0.75%), and in other relatives in 12 cases (3%). There was a history of migraine in a parent in 8 cases (2%), and in other relatives in 2 cases (0.5%). Other nervous disorders as alcoholism, "nervousness" and defectiveness were present in the family in 27 cases (6.75%). Hereditary factors were thus present in 52 cases or 13%. Moreover, the etiology of the convulsions in the patient with hereditary tainting was often due to organic disease of the brain, as brain tumor, brain injury and encephalitis. Evidently, hereditary factors alone seldom if ever account for epilepsy.

Mental changes of some type were present in 103 cases, or 25.75%. In all cases of known etiology, these changes could be ascribed to an organic disease of the brain which was responsible for the convulsions. Thus there was mental deficiency in 16%, based on birth injury, encephalitis of childhood, hydrocephalus and congenital brain disease. Other organic types of mental disorder were present in 9.5%, in such diseases as syphilis, brain tumor, cerebral arteriosclerosis, cerebral degeneration and myxedema. Only 8 cases with undetermined etiology (7.9% of that group) presented mental changes in spite of the fact that in 45 cases convulsions had been occurring for over 10 years. Mental changes of organic type were thus not secondary to the convulsions, and do not necessarily accompany epilepsy. When present, they are probably always due to an underlying organic disease of the brain.

The laboratory was of little aid in the diagnosis of these cases except in syphilis, where a positive Wassermann reaction was obtained on the blood or spinal fluid. In other cases, spinal fluid examination did not give significant findings. Chemical examinations of the blood were of no value. Blood counts gave normal findings in our series except in a case of coincident glandular fever, in which there was a generalized lymphadenitis with a lymphocytosis. In 21 cases, the stools were examined, and no parasitic ova were found except in one case; in this case, hookworm ova were found. This patient had had a definite brain injury. The basal metabolism was taken in only a few cases where indicated; in two cases, classified as of endocrine origin, the basal rate was minus 18% and minus 28%, respectively. A roentgen-ray examination of the head is always requested; it was obtained in 119 cases, and in 89, or 74.8%, gave normal findings. In the others, the roentgen-ray was of valuable aid in diagnosis, revealing local rarefaction of the skull, calcifications, convolutional atrophy and other changes.

The sex incidence in this series showed that males were affected twice as frequently as females. This depended largely on the greater male incidence of brain tumor, brain injury and syphilis. The age incidence showed that the onset of attacks was under 25 years in 72% of cases; in those with onset after the age of 25 years, the most frequent causes were brain tumor (28.4%), brain injury (17.4%), syphilis (14.6%), arteriosclerosis (8.2%), tumor suspect (6.8%), and encephalitis (3.6%). The etiology was not definitely determined in 34.7% of those with

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

†I wish to thank Dr. Chas. E. Dowman for many of the case records included in this study.

onset before the age of 25 years, and only in 15.6% of those with onset after 25 years of age. This shows the importance of organic disease of the brain in producing convulsions beginning after the age of 25 years, the most frequent of which was brain tumor.

Major seizures occurred in 50% of the cases, and minor seizures in 12%. Both major and minor seizures occurred in 6%. Localized seizures occurred in 104 cases, or 26%. These cases were classified as follows: Brain tumor 24%, encephalitis, 20%, brain injury, 12%, birth injury, 10%, syphilis, 10%, tumor suspect 8%. Rarer causes were brain abscess and congenital brain disease. The etiology of the localized seizures was undetermined in 17% of the group. The most frequent cause of localized seizures would appear to be brain tumor. Forty-one of these cases were operated upon, with the following findings: Brain tumor, 24; brain abscess, 1; traumatic brain cyst, 1; localized arachnoiditis due to syphilis, trauma or undetermined etiology, 15. Conjugate deviation of the head and eyes accompanied major seizures in 1.2%. There was a localized warning preceding the attacks in 2.75%, and attacks were followed by a temporary localized paralysis in 2.5%.

Since epilepsy is merely a symptom, the most important phase of treatment is the diagnosis of the underlying condition. The examination of every epileptic should be an exhaustive one. Not the least important is a careful neurological examination. This should be repeated at intervals, as the convulsions may be the sole evidence of brain disease for some time before other signs or symptoms appear.

We were surprised to learn that about 74% of the cases in this series gave evidence from the history or examination of organic changes in the brain. The most frequent was encephalitis, which occurred in 14%. Most of these cases consisted of the so-called encephalitis or cerebral palsy of childhood. In these cases there was a history of a febrile illness in early childhood, with fever, stupor, convulsions and usually a hemiplegia. Convulsions usually appeared soon after this illness and recurred. The neurological examination showed frequent residual phenomena, as hemiplegia, strabismus and mental deficiency. A few cases in this group followed other types of encephalitis, including the epidemic type.

The second most frequent group was that due to injury at birth, comprising 13% of the series. The history in these cases showed frequent occurrence of prolonged labor, use of forceps in delivery, asphyxia at birth and infantile convulsions. Other symptoms of injury were marked irritability, prolonged stupor, and inability to nurse; occasionally a bloody spinal fluid had been found on spinal puncture. The neurological examination showed frequent evidence of hemiplegia, diplegia, strabismus, athetosis and mental deficiency.

The third most common group was that due to brain injury later in life, which comprised practically 13% of the series. In all cases there was a history of severe head injury, with loss of consciousness and frequently paralysis. In the majority, convulsions began in less than a year after the injury. In about half of the cases, the neurological examination revealed focal signs, as unequal reflexes, a Babinski reflex, or localized sensory changes. The roentgen-ray examination showed a localized rarefaction of the skull in 8 cases. Thirteen cases were operated with the following findings: Brain cyst, 4; arachnoiditis, 8; softening of temporal lobe from hemorrhage, 1.

It is interesting to note that the above three types should be to some extent preventable. Further study is needed in regard to the etiology of cerebral palsy of childhood, and further attention to all of the infectious diseases of childhood, from a preventive standpoint. The obstretician also has a responsibility in the prevention of epilepsy.

Fourth in importance in this series was brain tumor, which was present in 47 cases, or 11.75% of the series. The tumor was verified by operation or autopsy, and by microscopic examination in all cases. The majority of these tumors were gliomas and endotheliomas. They were localized in all regions of the brain. The neurological examination was of the greatest aid in diagnosis. A choked disc was present in 32 cases, sec-

ondary optic atrophy in 3, and a normal ocular fundus in 12 cases. The roentgen-ray examination showed convolutional atrophy in 7 cases, calcification in a tumor in 3 cases, localized rarefaction of the skull in 2 cases and enlarged sellaturcica in 2 cases. The spinal fluid examination gave essentially negative findings except in one case, a glioma of the parietal lobe, in which a positive Wassermann reaction was obtained. In 24 cases, the seizures were localized; in 4 cases, the seizures were preceded by a warning of localized type; in 4 other cases, the seizures were followed by a localized temporary paralysis. These symptoms always indicate a focal lesion, and a tumor must be considered in diagnosis.

There were 18 cases (4.5%) classified as tumor suspects. In these cases, a brain tumor was almost certainly present, but was not verified by operation. There were focal neurological signs in all. If these cases were placed with the verified group, over 16% of the series were apparently due to brain tumor.

Next in importance was syphilis, which included 8.5% of the group. Half of these cases were due to congenital syphilis. A positive Wassermann reaction was obtained on the blood or spinal fluid in all cases. There were abnormal neurological findings in the large majority of cases. Again, we are dealing with a preventable disease.

There were 11 cases (2.75%) classified as congenital brain disease. All cases showed mental deficiency and abnormal neurological findings. There was a history of early onset of convulsions, without any preceding illness, and without symptoms suggesting birth trauma. It was considered that a defect in development of the brain, or a disease of the brain in utero had occurred.

There were 9 cases (2.25%) associated with cerebral arteriosclerosis. All cases showed retinal arteriosclerosis; there were mental changes in 4 cases, and in one case, a cerebral thrombosis had occurred.

In 7 cases, the convulsions were due to hydrocephalus. Typical findings of hydrocephalus were present in all cases.

In three cases, epilepsy followed epidemic meningitis. The neurological examination showed deafness and other abnormal findings in all cases.

Three patients had a progressive cerebral degeneration. The first was a case of infantile amaurotic idiocy; this patient was Jewish, the parents being first cousins. The patient showed the typical macular findings of this disease, with progressive dementia, blindness and paralysis. A second case was one of the late infantile type of amaurotic idiocy, sometimes spoken of as maculo-cerebral degeneration. In this case, symptoms began at the age of 4 years; there was progressive blindness, dementia and other neurological disorders, the patient finally presenting the picture of a decerebrate rigidity. The diagnosis has been confirmed by histologic examination. The third case was one of suspected Schilder's disease, or progressive subcortical degeneration.

There were two cases of brain abscess. One was located in the right frontal lobe, diagnosed chiefly by the presence of mental symptoms, ipsolateral tremor and a consecutive optic atrophy. The other case was one of left-temporal lobe abscess; this was diagnosed on the basis of the so-called uncinate type of fit: the attacks were preceded by hallucinations of smell. In addition, there were signs of motor disturbance on the opposite side.

In two cases, alcoholism was considered to be the chief etiologic factor. There was a history of chronic alcoholism in both cases, attacks occurring almost always after over-indulgence.

Two cases were considered to be of endocrine origen. In one, there was evidence of myxedema, and the basal metabolic rate was minus 28%. All other examinations gave normal findings. In the second case, there were signs of early acromegaly; the basal metabolic rate in this case was minus 18%. All other examinations gave normal findings.

There was one case considered to be of cardiac origin. In this case, there was a definite aortic stenosis, and slight enlargement of the heart. Convulsions occurred on over-exertion, probably due to cerebral anemia.

In 101 cases (25.25%), the etiology of the attacks was not definitely determined. Many of these cases were seen only at one

time; it is possible that further observation would have enabled one to make a diagnosis. The neurological examination in this group gave normal findings in only 85 cases. In one case, attacks followed being bitten by a snake; in another, they followed a severe burn. There were signs of endocrine disorder in a few; thus, in one case, attacks followed a thyroidectomy; in another, there was marked pubertas praecox of unknown cause. One patient had recurrent malaria over many years. In another, there were calcifications of the choroid plexus of both lateral ventricle, shown by roentgen-ray examination. In 9 cases with localized seizures, operation revealed a localized arachnoiditis of unknown cause. There was a history of slight head injury preceding the attacks in 20 cases. Although there were abnormal findings in some cases of this group, a definite diagnosis was not possible at the time of the examination.

Conclusion. In a study of 400 patients complaining of convulsive seizures:

1. Hereditary factors were unimportant. Convulsions occurred in a parent in 0.75% and in other relatives in 3%. The total hereditary tainting was 13%, but usually the etiology of the attacks could be ascribed to other factors.

2. Mental deficiency occurred in 16%, and mental disorders of organic type in 9.5%. These could always be ascribed to an organic disease of the brain, responsible for the convulsions, with the exception of a few cases of obscure etiology.

3. Males were affected twice as frequently as females.

4. Convulsions beginning after the age of 25 years were due to the following factors, in order of frequency: Brain tumor, brain injury, syphilis, arteriosclerosis and encephalitis.

5. The most frequent causes of localized seizures, in order of frequency were: Brain tumor, encephalitis, brain injury, birth injury and spyhilis.

6. About 74% of the cases gave evidence of organic changes in the brain, as follows: Encephalitis, 14%; birth injury, 13%; brain injury, 13%; brain tumor, 11.7%; syphilis, 8.5%; congenital brain disease, 2.7%; cerebral arteriosclerosis, 2.2%; hydrocephalus, 1.7%; epidemic meningitis, 0.7%; progressive cerebral degeneration, 0.7%; brain abscess, 0.5%; tumor suspect, 4.5%.

7. The etiology was not definitely determined in 25.25% of the cases. Many of these cases were seen only once, and a variety of abnormal findings were found; the significance of these findings, however, was obscure.

DISCUSSION ON PAPER OF DR. SMITH

Dr. Charles E. Dowman, Atlanta: I had not intended to discuss Dr. Smith's paper, because it is based on some of my own material and I wanted to hear some discussion from other sources. I do feel, however, that a paper which represents the amount of careful, tedious analysis that Dr. Smith made in preparing this paper should not go by without a few words of discussion.

There may be brought against his statistics the argument that most of these patients were sent to a neurological surgeon with the idea that there might have been some underlying neurological surgical condition responsible for the epileptic attacks. However, this may not be such a factor as one might think on the surface, for many of the patients were referred not to me but to Dr. Smith, a neurologist, simply because they had convulsions. Certainly a series of 400 private cases of the type with which we all come in contact, carefully analyzed from an etiological standpoint, would give us a better idea of the prevalence of organic disease that can be demonstrated by careful examination, than would a series from an epileptic colony where the patients had been sent because no definite disease had been found, or of cases classed as epileptiform seizures rather than essential epilepsy. So far as I know there are no contributions on record in which just such a series has been analyzed. It was startling to Dr. Smith and to me that in a series of 400 private cases, in which the chief complaint was epileptic seizures, 74 per cent were verified as being due to organic disease of the brain.

I wish Dr. Smith had time to go into the question of treatment, but he has taken this up in some other contributions. He feels and we all feel that it is very important in the treatment of cases of convulsions in addition to the diagnostic standpoint to get at the etiological factor and try to prevent these seizures, if possible. Anyone who has seen a brain during an epileptic seizure, as I have on

two or three occasions in doing craniotomies, wonders how such a patient ever survives an attack. There is very marked congestion, and one has to almost "ride" the brain to keep it from leaving the cranial cavity. If there is such terrific pressure during convulsions, one can see how very easily this may result in petechial hemorrhages during these seizures, which in turn may give rise to gliosis, which may convert a case with a convulsive tendency into true epilepsy.

Dr. William A. Smith, Atlanta (closing): I appreciate Dr. Dowman's discussion greatly.

Regarding the etiology of epilepsy, we still have a great many conflicting viewpoints. There are those who believe that epilepsy is always due to an organic disease of the brain, and those who believe it is always based on a disordered personality. What we need is a careful study of large groups of cases over a period of time in order to determine etiologic factors.

Another aspect needing more attention is the prevention of epilepsy. I referred to this in the cases due to head injuries and syphilis. I think a great deal of attention should be paid to the prevention of epilepsy, because epilepsy is a frequent and possibly increasing disorder.

REPORT OF THE HOUSE OF DELEGATES OF THE MEDICAL ASSOCIATION OF GEORGIA*

FIRST MEETING

Tuesday, May 7, 1929

The House of Delegates was called to order at the Dempsey Hotel, Macon, Georgia, at 2:20 p. m. by the President, Dr. C. K. Sharp, Arlington.

ROLL CALL

The Secretary stated that he held in his hand the signed roll of the following fifty-three Delegates and Councilors, and moved that this constitute the roll call for this meeting:

J. D. Applewhite, Bibb County.
O. W. Roberts, Councilor 4th District.
J. H. Grubbs, Pike County.
A. S. M. Coleman, Councilor 11th District.
W. E. Mobley, Bibb County.
Ernest F. Wahl, Thomas County.
Charlie Adams, Crisp County.
Ralph H. Chaney, Richmond County.
W. F. Reavis, Ware County.
H. D. Allen, Jr., Vice-Councilor 10th District.
T. F. Harper, Randolph County.
F. R. Mann, Telfair County.
J. R. Clements, Mitchell County.
B. T. Wise, Sumter County.
John A. Corry, Lamar County.
J. W. Simmons, Glynn County.
F. K. Neill, Dougherty County.
M. A. Clark, Bibb County (Parliamentarian).
J. D. Zachary, Jones County.
William H. Myers, Councilor 1st District.
C. S. Jernigan, Hancock County.
William L. Davis, Dougherty County.
V. L. Bryant, Jefferson County.
L. S. Osborne, Ben Hill County.
E. T. Coleman, Emanuel County (Ex-President).
E. S. Peacock, Washington County.
Stewart D. Brown, Franklin County.
M. M. Head, Councilor 6th District.
E. F. Chaffin, Stephens County.
Dan Y. Sage, Fulton County.
M. M. McCord, Councilor 7th District.
R. C. Cross, Barrow County.
J. K. Quattlebaum, Chatham County.
C. E. Waits, Fulton County.
W. A. Selman, Vice-Councilor 5th District.
G. Y. Moore, Councilor 3rd District.
C. W. Roberts, Fulton County.
G. H. Alexander, Monroe County.
W. R. Dancy, President-elect.
J. G. Dean, Terrell County.
C. L. Ayers, Councilor 9th District.
W. C. Miles, Spalding County.
E. C. Thrash, Councilor 5th District.
W. E. McCurry, First Vice-President.
Marion T. Benson, Fulton County.
J. W. Palmer, Montgomery County (Ex-President).
R. L. Miller, Burke County.
W. H. Perkinson, Cobb County.
A. F. White, Butts County.
James N. Brawner, Fulton County.
T. F. Abercrombie, Commissioner of Health.
President Sharp and Secretary Bunce.

The motion to accept the roll call was regularly seconded and carried, and President Sharp declared the House of Delegates duly constituted for the transaction of business.

REPORTS OF OFFICERS

President's Report

President Sharp requested the First Vice-President, W. E. McCurry, to take the Chair while he presented the following annual report of the President:

(Report printed in May Journal).

The President then resumed the Chair.

*Abstract. Complete stenographic copy on file in office of Association.

Report of President-Elect

Dr. W. R. Dancy presented the following report:

(Report printed in May Journal).

Report of First Vice-President

DR. W. E. McCURRY: I have done everything I was called on to do, but the only service I have been asked to perform was that of just a few moments ago when Dr. Sharp asked me to preside for a few minutes.

Report of Parliamentarian

DR. M. A. CLARK: I wish to take this opportunity to thank you for your thought and loving consideration of me last year. Words are inadequate to tell you of the support and strength they gave me. If serving you faithfully can show my appreciation I shall strive to do that.

As your parliamentarian I have no report, except that I have re-read Roberts' Rules of Order, and the Constitution and By-Laws, and recently the Proceedings of last year so as to refresh my memory as far as possible. I shall do my best.

Report of Secretary-Treasurer

Dr. Allen H. Bunce presented the following report:

REPORT OF SECRETARY-TREASURER

To the Members of the House of Delegates of the Medical Association of Georgia:

I herewith submit my official report as Secretary-Treasurer for the fiscal year—May 1, 1928, to April 30, 1929.

Membership

The total paid membership on May 1, 1929, was 1,323 as compared to 1,401 on May 1, 1928—a decrease of 78 members. This decrease was due almost entirely to the delay in the payment of dues of our largest constituent society occasioned by irregularities in the accounts of the society through the fault of a lay assistant secretary. Today we have 1,470 paid members.

The gradual growth of the Association through securing as members a larger percentage of those eligible is shown by the following figures:

Total membership, December 31, 1926	1,700
Total membership, December 31, 1927	1,744
Total membership, December 31, 1928	1,796

I mentioned "greater percentage" of those eligible because there has been a considerable actual decrease in the number of physicians in the state during these years.

During the year we have lost 31 members by death. We have also recorded the deaths of 27 non-members.

Constituent Societies

On May 1, 1929, we had, in good standing, 88 constituent societies as compared with 95 on May 1, 1928; however, we had an increase in our Honor Roll. Several years ago we began placing societies on the Honor Roll when they had secured all eligible physicians as members.

On May 1, 1926, we had 10 societies on this Honor Roll; on May 1, 1927, 13; on May 1, 1928, 15; on May 1, 1929, 18. This shows an increasing interest on the part of the constituent societies in securing all eligible physicians as members.

Our District Societies have functioned well this year. Two of our districts have made enviable records. The Third District had 130 paid up members on May 1, 1929—the same number recorded on December 31, 1928. The Seventh District had 133 paid up members on May 1, 1929—a gain of seven over the number reported on December 31, 1928. This is the only district which has shown an increase in membership.

The Journal

During this year the Journal has contained a total of 904 pages at a total cost of printing and mailing of $5,702.58 as compared with 800 pages at a cost of $5,986.64 last year. In other words, it has contained 54 more pages but has cost $284.06 less than last year. However, its income from advertising showed a decrease of $874.46—being $6,071.09 last year and only $5,196.63 this year. Our advertising has been strictly limited to those products accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

In figuring the profit and loss on the Journal we have credited it with the regular subscription of three dollars per paid member, independent subscriptions by non-members at three dollars each and advertising. We have charged to the Journal account the total cost of printing and mailing the Journal, one-half the general postage account, one-half the rent, salaries and all other general expense of the office of the Association. After all of this was deducted we had left a profit of $1,861.28 in the Journal account for this year.

In view of the above facts I again recommend that, as soon as practicable, the Jour-

nal be given a separate account and be allowed to use its surplus for improvement and enlargement.

Package Library

Some time ago we began collecting reprints and arranging them in packages through the voluntary aid of The A. W. Calhoun Medical Library of Emory University. We now have thousands of reprints on a great variety of subjects. This was done in an effort to improve the papers read before our societies by giving our members all available information on any desired subject at a nominal cost of twenty-five cents for packing and mailing. Many of our members have used this service.

If this is to be continued we must have filing cabinets for the reprints on hand and those constantly arriving. In addition we will need some extra help—a few hours of a student assistant each week—for the purpose of classifying and filing the material. This could easily be taken care of by a small portion of the surplus earned by the Journal.

*Financial Report**

All bills due are paid.

Balance in Bank, May 1, 1929	$ 3,667.47
Balance in Bank May 1, 1928	4,720.57
Decrease in bank balance	$ 1,053.10
Decrease in bank balance during 1927-8	1,016.20
Decrease in past two years	$ 2,069.30
Gross income 1928-9	14,152.33
Gross income 1927-8	14,667.55
Decrease in income 1928-9	$ 515.22
Gross expenditures 1928-9	15,205.43
Gross expenditures 1927-8	15,683.70
Decrease in expenditures 1928-9	$ 478.27

Thus, although we have been able, through strict economy, to decrease our expenditures during this year our expenses are still exceeding our income by over a thousand dollars per year.

Recommendations

1. Our income must be increased or our expenses reduced.

2. A modern system of bookkeeping should be installed in the central office. The reasons for this are self-evident.

3. The books and accounts of the Secretary-Treasurer should be audited annually by a Certified Public Accountant.

4. All officers and employees of the Association who handle any of its funds should be placed under bond.

Respectfully submitted,

ALLEN H. BUNCE,

Secretary-Treasurer.

THE PRESIDENT: This splendid report of our Secretary is automatically referred to the Council.

REPORT OF COUNCIL

Dr. M. M. Head, Chairman, presented the following report:

Mr. President, Fellow Members of the House of Delegates:

Two meetings of the Council have been held since the last annual session of the Association.

The first meeting was held in Atlanta, October 17, 1928. Eleven Councilors, one Vice-Councilor, the President, President-elect and the Secretary-Treasurer were present.

Each Councilor made a report on the membership and conditions in his district.

The Council approved the action of the Publication Committee in securing a contract for printing the Journal at a saving of about 30 per cent.

The Chairman of the Committee on Health and Public Instruction was authorized to publish in the Journal a form of health examination blank, and to supply such blanks to physicians at one cent each.

The Secretary-Treasurer made a financial report for the Association.

Reports were made by the President and President-elect of their visits to County and District Society meetings, and of their efforts to secure the passage of the Basic Science bill.

The second meeting of the Council was held at Macon, March 6, 1929. Eight Councilors, one Vice-Councilor, the President, President-elect, and Secretary-Treasurer were present.

Each Councilor made a report of the membership and conditions in his district.

The Secretary-Treasurer made a financial report of the Association, and a statement of the membership for the years 1926, 1927 and 1928, showing a substantial increase in members.

The President and President-elect reported on their efforts to further the interest of the legislative program of the Association, and of their visits to meetings of the county and district societies.

A motion was made and regularly carried that the Council recommend to the House of Delegates at the next annual session an in-

*Detailed statement as approved by the Council and House of Delegates was published in the September, 1929, issue of the Journal.

crease in the amount of the annual dues.

DR. W. A. MULHERIN: I move that we accept the report of the Council.

Motion seconded and unanimously carried.

REPORTS OF COMMITTEES

Scientific Committee

Dr. W. A. MULHERIN, Chairman: The first meeting of this Committee was held on the Dixie Flyer on our way home from the meeting of the American Medical Association in Minneapolis. At that time it was decided to carry out the recommendations of the Council that we would send invitations to men practicing the different branches of medicine throughout each district, asking them to send in titles for papers for our program so that we could consider all of the specialties. We sent out thirty-five invitations, to which we received thirteen replies, and of these eleven submitted titles.

Your Committee, with all members present, met three times for the purpose of preparing a suitable program for the eightieth session of the Medical Association of Georgia. The last meeting was held in Atlanta on March 16, the day after the expiration date for receiving titles and abstracts of papers for the program. At that meeting a program was agreed upon and a copy furnished the Medical Association of Georgia so that it might be printed in the April issue of the Journal, in accordance with the By-Laws of our Association.

About twice as many titles of papers were submitted as we were able to assign a place on the program, showing a very commendable spirit among the members of our organization. We wish to thank all who sent in titles and abstracts, and to state that the Committee very much regrets that it could not accommodate everyone who submitted a paper.

The printed program which you received when you registered at this meeting we respectfully submit for your approval as the official program, and therefore the regular order of procedure for the eightieth meeting of the Medical Association of Georgia.

W. A. MULHERIN,
Chairman.
C. W. ROBERTS,
ALLEN H. BUNCE.

Dr. Mulherin moved the adoption of the report. Motion seconded and carried.

Committee on Public Policy and Legislation

DR. C. E. WAITS, Chairman, presented the report, which will be published later.

DR. W. A. MULHERIN: I think the House of Delegates should commend the very important work Dr. Waits and his Committee has done. I move you, Sir, that a special rising vote of thanks be tendered to Dr. Waits and his Committee.

Motion seconded and unanimously carried.

THE PRESIDENT: I should like to ask the consent of the House of Delegates to have Dr. Eugene Murphey appear before us at this time to make a brief report.

Upon motion regularly seconded and carried this permission was granted.

DR. EUGENE MURPHEY: I wish to call your attention to the work of the committee on the cost of medical care, which is operated under the direction of Dr. Ray Lyman Wilbur. As we all know, for many years every medical organization and every doctor has had before him continuously the specter of state medicine, the fear that the same thing will be done in this country that has been done in Great Britain. If one approaches the every-day layman on the street today who has had sickness in his family, and condones with him, he immediately complains about the dreadful cost of his expenses, stating that they were so and so. He talks to another layman about it. Their impression is that the cost of medical care is the doctor's bills, but it is really a great deal more, and doctor's bills are only a small part of it. This holds true throughout every state of the Union. The cost of medical care is being surveyed in the most comprehensive survey that has ever been made, in an effort to ascertain all the factors that have to do with the care of sick. It is estimated that it will require five years to systematize and analyze all the statistics that will be collected. The first step is the collection of data. A certain number of cities and towns in Georgia have been chosen, and certain rural communities to assist in this work, and that will be Georgia's contribution.

For the furtherance of this work I come before you to ask your utmost aid and cooperation, for we cannot intelligently embark upon the correction of evils until we know what things the evils are. At my suggestion the young woman who is covering Georgia in quest of these data has come to Macon, to appear before you if you so desire, but that is not her preference. She will be here at the hotel with all of the form blanks, and will cheerfully furnish any information as to the way in which this work will be carried out.

Committee on Arrangements

DR. C. C. HARROLD: The only change that has been necessary in the plans announced in the program is the change of the hour for

the Thursday evening meeting at the Country Club, which will be 7:30. Cars will be provided to transport the doctors and their ladies.

I wish to invite as many of you as feel like it to come up to my house, at 550 Orange Street, between 5:00 and 7:00 this evening, for an informal gathering. We will be glad to have any or all of you come up.

The President has asked the privilege of having a few seats set aside for such negro physicians as wish to attend our meetings, and this has been attended to, and also a section up-stairs has been reserved for them for the public meeting at which Dr. Fishbein is to make his address. If there is no objection this plan will be carried out.

On motion regularly seconded and carried this report was accepted with thanks.

Committee on Medical Defense

Dr. M. A. Clark, Chairman, presented the report.

DR. CLARK: A few years ago suits were very much more numerous. Since we have adopted the present plan of medical defense they have been greatly lessened. Since 1916 we have never lost a case that has come to trial, and have had many cases thrown out of court. Of the nineteen suits now pending the smallest is for $10,000.00, the largest for $100,000.00. No member of the Committee has ever received a cent of money for expense or anything else. The entire appropriation has been expended in the defense of suits. The Committee has made every possible effort to keep the expense down, but with the number of suits now pending it will be impossible to get along with less than the usual appropriation of $3,500.00.

We, as a Committee, are rather proud of the value of this Committee to our membership, and we heartily approve the action of the Association. As a matter of interest it may be well to tell you that the suits have been almost equally divided among the cities and rural districts. The cities have no preference, as is sometimes thought. The medical profession as a whole is getting the benefit in the defense of these suits, and all of us are getting the moral benefit.

Committee on Necrology

Dr. R. L. Miller, in the absence of Dr. E. C. McCurdy, presented the following report:

*IN MEMORIAM**

Aaron, Ira E., Lyons, July 20, 1928.

Adair, Robin, Atlanta, April 26, 1929.

Anderson, John M., Barnesville, February 20, 1929.

Baker, Hinton J., Augusta, December 28, 1928.

Barwick, George M., Soperton, January 9, 1929.

Brown, John L., Camilla, January 30, 1929.

Bullard, John M., Machen, March 4, 1929.

Byron, J. Lee, Jackson, June 18, 1928.

Carswell, Nathaniel T., Macon, May 1, 1928.

Carter, Edmund W., Thomaston, October 26, 1928.

Carter, Henry C., Atlanta, April 4, 1929.

Daniel, Eugene L., Atlanta, July 4, 1928.

Elkin, Archibald, Atlanta, March 29, 1929.

Etheridge, Samuel G., Sparks, June 16, 1928.

Fitzgerald, Philip H., Blakely, April 30, 1928.

Griffin, Pierce E., Edison, March 23, 1929.

Hamrick, Henry Parson, Eatonton, April 23, 1929.

Harris, Eugene A., Sandersville, June 18, 1928.

Julian, George W., Tifton, May 29, 1928.

Martin, Gordon F., Menlo, December, 1928.

Martin, Henry H., Savannah, June 12, 1928.

Monroe, D. H., Emerson, August 22, 1928.

Montgomery, Charles J., Augusta, January 14, 1928.

Quillian, Wiley H., Thomaston, March 16, 1929.

Riden, Claude F., Bostwick, November 22, 1928.

Rudolph, John Boyd, Gainesville, April 10, 1929.

Shankle, Olin E., Commerce, March 31, 1929.

Smith, Henry A., Americus, April 17, 1929.

Stow, Micollius N., Jesup, December 14, 1928.

Underwood, Julius M., LaFayette, January 2, 1929.

Whelchel, Henry C., Douglas, April 2, 1929.

On motion regularly seconded and carried this report was accepted as read.

Committee on Health and Public Instruction

Dr. Theodore Toepel, Chairman, presented the report, which was not adopted.

DR. EUGENE E. MURPHEY moved that the unanimous consent of the House be

*Please notify the Secretary of any errors or omissions.

given to hear Dr. S. T. R. Revell at this time.

Motion seconded and unanimously carried.

DR. S. T. R. REVELL: About ten days ago a member of the Kiwanis Club told me that the Club wished to do something for the health of Georgia. He said they had observed the ravages of malaria and that if anything could be done in regard to this they would be delighted. I happened to be on the firing line and saw all that he saw several fold. We talked the matter over and decided to make an effort to obtain Federal aid. We went out to Burke County and saw Dr. Miller, and we saw Dr. Abercrombie, and he said, after some discussion, that he would go to Washington and take the matter up. I have written to Senator George and Senator Harris and they have sent a letter asking us to put this before them the week of the fifteenth of May. Dr. Abercrombie has a budget that he has worked out for the purpose of preventable disease in Georgia, which involves quite a large amount, all of which we do not hope to put into the prevention of malaria, but a fair proportion of it.

We all know something of our Georgia Legislature and know how difficult it is to raise money for any purpose, except for the building of roads, which we seem to do very successfully. We have four cents per capita for health in Georgia. In North Carolina they have seventeen cents per capita, and in other states much more. During the last year we had 87 per cent increase in malaria over 1927. We had many deaths from malaria last year, every one of which we could have prevented had we had the necessary funds, and if we can get to Congress and get them to give us dollar for dollar, or anything they will advise that will give us an opportunity to rid Georgia, North Carolina and other states of the greatest bar to our health and our success, we can accomplish much. If we can do anything that will enable us to achieve that desire, it seems to me it will be the most wonderful thing that has happened since I have known anything about Georgia.

I have some resolutions which, if it is in order, I will read.

WHEREAS, realizing that malaria, owing to its severity and scope, has become a bar to our progress and prosperity, and a menace to our health and lives, as evidenced by an 87 per cent increase in deaths in 1928 over 1927, and,

WHEREAS, the eradication of malaria has become a most vital problem faced by the people of Georgia, involving as it does not only an appalling loss of life, but great economic loss through arrested industrial development, and,

WHEREAS, realizing that our State at present is financially unable to cope with the situation, and interstate relations with other states would be a source of constant reinfection if our state were freed of this infection, and,

WHERAS, a plan is now being formulated and will be put into operation whereby, through the leading organizations and otherwise an effort will be made to secure federal aid for the eradication of malaria in Georgia, therefore be it

RESOLVED, That the Medical Association of Georgia now in session pledge active co-operation in an effort to secure federal aid for the eradication of malaria in Georgia, to the extent and in the way herein set forth:

1. That the president of the Medical Association of Georgia, each district president and each county president be requested to send three telegrams on May 29th, one to Senator W. J. Harris, one to Senator Walter F. George, and one to his district congressman, asking their utmost aid in securing federal funds for malaria eradication in Georgia.

2. That each individual member of the Medical Association of Georgia be requested through their local presidents to write one letter to Senator Harris or Senator George, or his congressman, urging him to do all in his power towards securing this federal aid, this letter to reach Washington, D. C., by May 12, 1929.

3. That the members of the Medical Association of Georgia secure as many signatures as possible to accompany a petition, and return it to Dr. S. T. R. Revell, or Mr. Roger Whigham, Louisville, Georgia, by May 11th, to be presented to Congress by a committee, one of whom is Dr. T. F. Abercrombie, Commissioner of Health of Georgia.

Cancer Commission

Dr. J. L. Campbell, Chairman, presented the following report:

(See Editorial section of November issue of Journal).

Upon motion regularly seconded and carried, this report was accepted as read.

Committee on Medical History

Dr. E. C. Thrash, Chairman, reported progress and suggested a continuation of the work of the committee.

Dr. Thrash moved the adoption of this report. Motion seconded and unanimously carried.

Committee on Crawford W. Long Memorial Prize

Dr. W. R. Dancy, Chairman, presented the following report, and moved its adoption:

From time to time at various meetings and through the Journal of the Medical Association of Georgia this Committee has advised the membership of this Association of the advantages and requirements of the splendid prize which this Committee controls.

At the annual session in Savannah, in May, 1928, the prize was presented to Dr. M. Hines Roberts, of Atlanta. This year there was only one response to our urgent appeal for competition for this prize.

The one essay presented this year, although excellent in many respects, was considered by the committee not worthy of the prize. Therefore, the committee unanimously decided not to present the prize this year. As you may recall, it was the expressed wish of the donor that the essay consist of original work and be considered worthy by the committee in order to qualify for the prize. This prize is a very generous donation and the membership, in appreciation of it, should make special efforts to compete for it. It will be the endeavor of the committee to do everything possible to develop an interest in the competition, and it recommends that the members of the House of Delegates increase the interest of their respective societies.

Respectfully submitted,

W. R. DANCY, M.D.,
Chairman.
STEWART ROBERTS, M.D.,
V. P. SYDENSTRICKER, M.D.
GEORGE BACHMANN, M.D.
R. V. LAMAR, M.D.
Committee.

The motion to adopt was seconded and unanimously carried.

Report of Delegates to the A. M. A.

Dr. E. C. Thrash presented the following report:

Report from the House of Delegates of the American Medical Association:

Since the complete transactions of the House of Delegates was published in the Journal of the American Medical Association there will be no necessity of an exhaustive report to the House of Delegates of the Medical Association of Georgia. All of your delegates were present at each meeting throughout the entire session and gave a splendid account of themselves. Georgia was recognized unusually well, as much so as any other one state in the Union. One of your Delegates is Vice-Speaker, and the appointment of the Chairmanship of the Committee on Constitution and By-Laws was given to a Georgia Delegate.

Exhaustive reports were made from the Secretary of the American Medical Association, the Trustees, and the various standing committees, all of which were acted upon by the House and published in the Journal.

Two important changes were made in the Constitution, one was bearing upon amendments to the Constitution. Changes and amendments are made now by two-thirds of those attending the session instead of three-fourths. This was done because it is practically impossible to get three-fourths of those attending the session in the House at one time.

Another change was that the American Medical Association can now expel members or Fellows of the Association without referring the matter to the respective constituent Associations and Societies. This change does not interfere with memberships in the respective associations and societies.

There has been an important matter up between the Board of Trustees and one of our delegation concerning the manufacture and sale of adulterated drugs. Your Delegate felt that it was more important to the medical profession of the United States for the Council on Pharmacy and Chemistry to have published in our Journal a list of those manufacturers of Pharmaceuticals who are manufacturing adulterated drugs which drugs are ultimately sold to the medical profession, than to publish lists of those dealing in fradulent patent medicines to be sold directly to the public. Many fines have been put upon respective manufacturers by the Department of Justice for manufacturing adulterated drugs, about which the profession generally knows nothing. Quite a number of fines have been put on drug manufacturers for putting out adulterated ether. Representatives of the firms who have put out adulterated ether have had the matter up with your Delegate and they claim that the ether undergoes changes after its manufacture, but they say now they are putting it out in cans properly lined so that this change will not take place. Whatever the cause is, the medical profession is liable to have casualties in the administration of this defective ether and every precaution should be maintained to safeguard those using the ether. After extensive correspondence between your Delegate, the Secretary of the American Medical Association, the President, the Editor of the Journal and the Board of

Trustees, it was deemed wise not to bring this matter before the House of Delegates, and it was agreed that those indicted for the manufacture of adulterated drugs would be published in the Journal. This is constructive because it will certainly make those engaged in the manufacture of drugs for prescription purposes more careful.

Respectfully submitted,
C. W. ROBERTS,
A. H. BUNCE,
E. C. THRASH.

Dr. Thrash moved that the House of Delegates endorse the work done by the Delegates in reference to the manufacture of impure drugs.

Motion seconded by Dr. Mulherin and carried.

UNFINISHED BUSINESS

Dr. R. L. Miller moved that the resolution presented by Dr. S. T. R. Revell be adopted, with the addition that the State Boards of Health of Alabama, Mississippi, Louisiana, Arkansas and North and South Carolina be requested to cooperate with Georgia. (Motion seconded).

DR. EUGENE E. MURPHEY: I wish to endorse this resolution most heartily. The whole economic and social welfare of many states is jeopardized by malaria. If we can get federal aid much can be accomplished within a short period, and I hope that you will all assist in every way possible.

DR. R. L. MILLER: It is the intention to have this put on the Farmer Relief Bill. There is nothing comparable with the ravages of malaria in the southern portions of the state. I am heartily in favor of the measure and sincerely hope you will all endorse it and work for it.

Dr. Miller's motion to adopt this resolution was put to a vote and unanimously carried.

DR. M. A. CLARK: A very important matter under the head of unfinished business is the change of the Constitution with reference to raising the dues. This is one of the most important things that is to come before this body before many of the members of the House of Delegates have left. I do not think it wise to defer this matter until Thursday morning.

DR. W. A. MULHERIN: I move you, Mr. President, that we make it a special order of business for an adjourned meeting at 8:00 o'clock this evening.

Motion seconded and unanimously carried.

Public Policy, Legislation or Appropriations Resolution

DR. J. W. SIMMONS: In order to expedite the business of the House of Delegates, I move that all reports of special and regular committees of the Association involving matters of public policy, legislation or appropriation of the funds of the Association be submitted in writing to the Secretary of the Association a sufficient time in advance of the regular annual session, about March 15, to permit of the publication of said recommendations either in the official program prior to the session, or in a special circular that shall be mailed to the constituent societies, in order that the delegates may be advised of the proposed changes.

Motion seconded and unanimously carried.

DR. MARION T. BENSON: I move that we adjourn until 8:00 o'clock.

Motion seconded, and the House of Delegates adjourned at 6:00 p. m.

SECOND MEETING

Tuesday, May 7, 1929

The adjourned meeting of the House of Delegates was called to order at 8:20 p. m. by the President, Dr. C. K. Sharp, Arlington.

ROLL CALL

The Secretary stated that he had the signed roll of the following twenty-seven Delegates and Councilors, and moved that this constitute the roll call for this meeting:

W. A. Mulherin, Richmond County.
M. A. Clark, Parliamentarian.
W. F. Reavis, Ware County.
H. M. Fullilove, Councilor 8th District.
W. A. Selman, Vice-Councilor, 5th District.
M. M. Head, Councilor 6th District.
C. E. Waits, Fulton County.
Marion T. Benson, Fulton County.
B. T. Wise, Sumter County.
Dan Y. Sage, Fulton County.
G. L. Loden, Madison County.
A. S. M. Coleman, Councilor 11th District.
W. E. McCurry, First Vice-President.
E. C. Thrash, Councilor 5th District.
James N. Brawner, Fulton County.
E. T. Coleman, Emanuel County.
J. G. Dean, Terrell County.
J. R. Clements, Mitchell County.
W. H. Garrison, Habersham County.
G. Y. Moore, Councilor 3rd District.
Ernest F. Wahl, Thomas County.
W. R. Dancy, President-elect.
J. W. Palmer, Ex-President.
C. W. Roberts, Fulton County.
J. W. Simmons, Glynn County.
President Sharp and Secretary Bunce.

The Secretary's motion to accept the roll call was regularly seconded and carried, and the President declared the House of Delegates

regularly constituted for the transaction of business.

THE PRESIDENT: We will continue under the head of new business.

DR. M. A. CLARK: Under Article X of our Constitution a notice of amendment was given last year that the amount of our annual dues should be changed from $5.00 to $10.00 per capita. In acting upon this recommendation you cannot make the amount over $10.00 or under $5.00. This proposed amendment should be accepted or rejected.

DR. C. E. WAITS: To clarify the matter, an amendment was introduced in Savannah last year, leaving it to this body to fix a sum between $5.00 and $10.00. Now it is up to this body to determine the amount.

The original recommendation of the committee that the dues should not exceed $10.00, as moved by Dr. Thrash, was put to a vote and carried.

DR. MARION T. BENSON: I offer a motion that this question be referred to the Council for recommendation.

Motion seconded and unanimously carried.

Dr. M. M. Head, Chairman, called a meeting of the Council for 9:00 a. m. Wednesday.

THE PRESIDENT: It has been requested that we grant the privilege of the floor to Mr. J. C. Wardlaw for a few minutes, as he has something to say to us in regard to the extension work of the University of Georgia.

MR. J. C. WARDLAW: I wish to make a few remarks which concern the Medical Association of Georgia and the University. Probably every one of you is familiar with the extension work of the medical college in Augusta. I have discussed the matter freely with Dr. Mulherin, Dr. Abercrombie and scores of others throughout the State concerning the plan of the University of Georgia to gradually extend the scope, if possible, and with your cooperation, of the postgraduate medical extension courses. Dr. Mulherin, Dr. Sydenstricker and others have expressed their entire approval of the movement, but state that the limited funds at their command have greatly handicapped the work of the University of Georgia in its extension plan throughout the State.

Briefly, the plan is that in enlarging the activities already started through the Medical College of the University as a whole, with the support of the staff of the College, and with the cooperation of the profession in Augusta and throughout the State, we might offer throughout the State certain postgraduate medical courses to the physicians in the several counties of the State, acting always through the District Societies and through each County Medical Society. I have personally visited the officers of the County Medical Societies in a number of the counties, particularly in the Western and Southeastern sections of the State, and have received the most cordial recognition and assurance of the sympathetic cooperation of the University men. These courses should last six, eight or nine weeks. Courses in pediatrics, diseases of the chest, and so on, given by recognized specialists who would be selected with your approval and that of the Extension Committee of the University, to the end that such specialists might be brought from wherever you advise and approve to give these extension courses, with the cooperation of the medical staff of Augusta, in sections of the State to be selected. Perhaps classes of five or six communities might be organized, and this might go from community to community one day a week for six, eight or nine weeks, with here a lecture, and there clinical work, for such time as might be approved by the Committee.

The University has no idea of commercializing the plan in any way, only of extending the work to the remotest counties of the State, on a basis which would only meet the cost of bringing such specialists in the several lines into the State.

I do not know what your reaction will be, but I greatly appreciate the opportunity to bring this matter before you, and ask you to take such action as seems to you wise, possibly the approval of the plan, or perhaps the appointment of an advisory committee to sit with the Extension Committee in the selection of men to carry on this extension work. We want your help, and we will do anything we can.

DR. R. L. MILLER: I move that we receive the remarks of Dr. Wardlaw, that we thank him for them, and that the matter be referred to the Committee on Health and Public Instruction. (Seconded.)

Dr. M. A. Clark offered as an amendment that the matter be referred to the Committee on Scientific Work. (Seconded.)

Discussed by Drs. Mulherin, Reavis and Clark, following which the motion, as amended, was put to a vote and carried.

Amendment to By-Laws

Dr. James N. Brawner introduced the following proposed amendment to Chapter VII, Section 8 of the By-Laws:

To amend Chapter VII, Section 8, by striking the entire paragraph and substituting the following:

"When a member in good standing in a component county society moves to another county in this state, he shall be given a written certificate of these facts by the Secretary of his society, without cost, for transmission to the Secretary of the society in the county to which he moves such member shall be considered to be in good standing in the county society from which he was certified and in the Medical Association of Georgia to the end of the period for which his dues have been paid."

DR. W. A. MULHERIN: We have with us this evening Miss Jane Van De Vrede, and I move that she be requested to say a few words about the nursing problem in Georgia.

Motion seconded and unanimously carried.

MISS JANE VAN DE VREDE, R. N.: It is just a year ago that I came before your Association for the first time. Your generous and understanding attitude toward the question presented made me glad to accept the invitation to appear at this time.

I think perhaps you expect me to give you some report of the activities of the nursing group—a sort of report of our stewardship, if you will.

May I venture to do so, and indicate where in my opinion the group seemingly responsible for failure to achieve results is so dependent upon other groups that no results are possible until the medical group, the hospital group and the nursing group can come to some common denominator of thought about some of the vital issues involved in this question of "the nursing situation," as the medical associations have so often termed the problem of securing adequate, efficient nursing service under satisfactory economic conditions?

The American Medical Association through its Council on Medical Education sets the professional standards of education which govern in general the conduct of institutions and physicians who practice.

When Florence Nightingale's achievements and contribution to sanitation and therapeutics stirred the world and resulted in the endowment of a real school of nursing, in 1860, it is natural perhaps that we should find the A. M. A. making a pronouncement about it. In 1869 it adopted a report strongly urging the establishment of similar training schools for nursing in every large and well organized hospital, and boldly averred that "nursing in its more exact sense is as much of *an art and a science* as medicine." All honor to that high utterance. Could the members of the medical profession have kept ever before them that picture of the "large and well organized hospital" school of nursing and the lofty idea that nursing paralleled the *science* of medicine as well as *the art,* it would not be necessary to quote from a later report made shortly after the three-year study of the Rockefeller Foundation on conditions in nursing and nurse education in the United States. The committee on the question of nurse education stated: "That the education of nurse training include (a) entrance requirements consisting of a four-year high school education; (b) that the length of the course be two years and four months, or twenty-eight months; (c) that the waste of the student's time in non-educational ward routine be greatly reduced; (d) that better teachers from both the medical and nursing professions be secured in the schools; (e) that the character and sequence of subjects taught, the percentage of time allotted to each subject and the correlation of practical and theoretical instruction considered with special care, and, (f) that the standard be such that it may be carried out by relatively small as well as large hospitals. That there be a classification of nurse training schools in which only those which conform to the standard outlined be considered as acceptable."

This committee went on record that it "appreciated the fact that these changes in nurse training schools might cause increased expense in the hospitals maintaining schools: nevertheless it was believed that the improvements would more than offset this expense in preventing serious results and greater expense which might accrue to the hospitals from the present chaotic condition in nurse education."

This is a splendid report, but it has a "catch" in it—that the standard be such that it can be carried out in "relatively small as well as large hospitals." What did they mean by relatively small hospitals? The general assumption is one of less than 50 beds, or an average of 30 patients daily. By that standard, 25 of our schools of nursing would be eliminated. If we adopted the four-year high school requirement for entrance to our schools of nursing, all but ten would be eliminated.

The suggestions of the College of Surgeons agree in the main with the report of this committee of the A. M. A., except naming a three-year high school requirement for entrance, which would give Georgia 17 nursing schools, and three-year course which is now in effect in all of them.

The American Hospital Association takes no standing of its own as to standards of nursing schools, but accepts for its pronouncement until the work of the National Com-

mittee on the Grading of Nursing Schools is completed the pronouncements of the State Examining Boards for Nurses. The Grading Committee in its work on schools thus far has held to two principles:

"1. No hospital should be expected to bear the cost of educating nurses out of the funds collected for the care of the sick. The education of the nurse is a public responsibility.

"2. The fact that the hospital is faced with serious financial difficulty should have no bearing upon whether or not it should be connected with a school of nursing. The decision should be made upon the kinds and amounts of educational experience which the hospital is prepared to offer."

Using this yardstick, I leave it to you as to what schools of nursing should exist in Georgia!

Is it James Harvey Robinson who says, "Few of us really think at all, and many of us when we think we are thinking or merely rearranging our prejudices.?" On no question does this seem more true than the economic situation affecting nurses and nursing. The time has come when we need to grapple with the problem. If we do, we will find its solution, and it takes no prophet to predict it will not be found in the path of tradition.

Why should this situation have such a bearing upon our schools? Because we are faced with meeting the facts that are rapidly becoming current in the 5525 and more copies of "Nurses, Patients and Pocketbooks." This knowledge will have a far-reaching effect on schools of nursing, as it will keep the most thoughtful, the higher types of young women from entering our schools of nursing unless those responsible for them take our schools back to their early organization of autonomy, of support and provision by the hospitals of adequate clinical and theoretical instruction upon a high plane. I am convinced the greatest contribution to the economic care of the sick that the physicians of Georgia who are responsible for hospitals could make would be a frank appraisal of nursing costs with and without student nurses, and incidentally such information would make a valuable contribution to nursing education. I believe our communities would be as ready to assume the costs of nursing education as they are to provide for schools of engineering, agriculture, teaching and other vocations concerned with the common welfare of the people, and the public should be judge of whether, if this is to be an assessment, it should not be carried by the entire citizenship rather than by those who are caught in the maelstrom of illness due to conditions ofttimes for which the public is responsibile.

Sickness costs are not intelligently considered. Michael Davis says: "Our spending habits for sickness are less than our spending ability."

It is the unevenness of the burden of sickness, not its total amount, which creates most of the present financial problems, and suggests the group insurance plan applied to the problem.

The American Medical Association, in one of its hospital studies, makes the statement "The current opinion of the public, church members and others alike is that the care of the sick is a burden that should be borne by the whole community, regardless of what organization may take the lead in any hospital project. Buffalo, Cleveland, Cincinnati, Detroit, Rochester and other cities are pooling community funds through community chests and including hospitals and visiting nurses' associations—and to this might be added nurse registries—in helping to solve the problem."

What stands in the way of such development in our state? Many minor things, but chief among them is the individuality and lack of organization and the private interests of physicians who own and operate the hospitals and nursing schools connected with them.

To physicians who belong to this group, and who I presume are not members of the Medical Association, may be credited the plan to overthrow present nursing legislation in Georgia, and substitute other legislation which shall embody amendments as to organization, standards, length of training, etc., resulting in lowered requirements for our schools.

May I plead the support of the organized physicians of the state for the present enactment governing nursing, at least until a longer time has elapsed in which to determine the results of the 1927 enactment, and the completion of the work of the National Committee on the Grading of Nursing Schools? Thus far we may say we have influenced the schools for the better in enforcing of two-year high school entrance requirement, which has long been in force but has been disregarded in a number of our schools under the permissive act. We have increased the number of registered nurses in the smaller communities. The nurses of the state have cooperated almost unanimously (only a few absolutely disregarding the law—one connected with a County Health Department, and one connected with a privately owned sanitarium. In both these instances had the

physicians employing them desired to support the law in regard to nursing, they would have undoubtedly registered rather than lose their positions). Of the 2,725 nurses qualified to practice for 1928, 2,462 have renewed their registration for 1929. Undoubtedly some have left the state and some have ended their careers by the three ways common to the profession of women—matrimony, missionary and sanitarium ways. The nurses participated in the formation of the Hospital Association as commissioned by your organization at the last meeting. At the initial meeting the greater portion of the assembly was composed of nurses. The first annual meeting is being held today, as you undoubtedly have heard from the report of your Hospital Committee, of which Dr. Lentz is the chairman. The Board of Examiners of Nurses and the State Nurses' Association work very closely in harmony, and mutuality of understanding. We bespeak the further cooperation of the organized physicians of the state and the hospital groups also—not to further the particular interests of nurses, but to advance the interests, present and future, of patients (they may safely rest there) to whose welfare our professions are dedicated jointly through the hospitals, and separately through our members.

Dr. M. A. Clark moved a vote of thanks to Miss Van De Vrede for her address, and that it be referred to the Committee on Hospitals.

Motion seconded and unanimously carried.

REPORT OF COMMITTEE ON HOSPITALS

Dr. Grady N. Coker, in the absence of Dr. C. S. Lentz, Chairman, offered the following report:

To the Honorable House of Delegates, Gentlemen:

During the past year your committee has met twice. It met first on October 17th in Atlanta at the call of the President of the Association, Dr. C. K. Sharp. This meeting was very satisfactory and resulted among other things, in the first concerted attempt to organize a State Hospital Association. Dr. Grady N. Coker, of Canton, Georgia, was elected Secretary of the Committee and personally got out a letter to all the hospitals in the State, advising them that the Chairman of the Committee had called a meeting in Macon on February 6, 1929, for the purpose of so organizing.

This meeting took up the greater part of the day and was well attended. The Georgia Hospital Association was formed; its purposes and objectives outlined; a tentative constitution and by-laws were adopted for the first regular meeting called again in Macon, for May 7th. To date several hospitals have joined as institutional members and a good response has been had from prospective active members.

Your Committee is pleased to report that it will work in active cooperation with the Georgia Hospital Association and we hope that within a very few years we will have an actively functioning body.

Respectfully submitted,
C. S. LENTZ, M.D.,
Chairman of Hospital Committee.

On motion regularly seconded and carried this report was adopted as read.

REPORT OF FRATERNAL DELEGATES TO FLORIDA

Dr. K. McCullough submitted the following report:

I regret very much that circumstances over which I have no control prevented my attending the 1929 meeting, and that consequently, I cannot give my report as fraternal delegate to Florida in person. I am therefore sending this brief report of my visit by Dr. Minchew, and trust that it will be satisfactory.

I was unable to attend the entire meeting at St. Augustine, but got there on the second day. After making myself known, I was very well received, and was registered as an honorary member. The few papers I heard were above the average, particularly one by Dr. Ralph Greene on "Aviation Medicine," in which he brought out the many new problems confronting our profession by the advance in aviation in this country, with reference to examination of pilots, and certain neurological conditions peculiar to that profession.

I was extended the usual introduction to the members, and also the courtesy of the floor in discussion of papers, and in the few words I said, invited as many of their members as could do so to attend our own meeting. The fraternal spirit which prevails between our brethren in Florida, and ourselves in Georgia was splendidly manifested, and I felt honored to have the opportunity to represent our state at this meeting.

K. McCULLOUGH.

Dr. Gordon Chason Presented the Following Report:

To the House of Delegates:

Through the courtesy of our President I had the honor and pleasure of visiting the Florida Medical Association as the delegate from this state. The society met at the inter-

esting old city of St. Augustine at the time when they were celebrating the four hundredth anniversary of the founding of the city, which contributed to the pleasure of the visiting physicians.

The Florida Medical Association is a real live society, composed of splendid doctors with real enthusiasm for work and the progress of their society. The privileges of the association were extended to me by the President, Dr. Waas, a most capable and efficient presiding officer. Dr. William D. Haggard, of Nashville, was the invited guest of the association and gave a most interesting lecture on "Perfected Methods in the Operation of the Badrisk Goiter Patient."

It was interesting to note the progress made in this society as shown by a membership of only 271 in 1922 and a membership of 1,041 at the present time. Financially, their society shows health and vigor—having the sum of $16,000.00 in cash surplus but their dues are $10.00 instead of $5.00 as in ours.

They have the same legislative problems as other states——the same difficulties in getting protective legislation passed by the legislature. They seemed quite determined to put through the Basic science bill at the next session of the legislature.

The general program was interesting and shows the splendid effort put forth by the essayists.

I am sorry Dr. McCullough, of Waycross, was unable to be present—he missed a good meeting and a pleasant trip.

GORDON CHASON.

On motion regularly seconded and carried this report was accepted with thanks.

DR. M. A. CLARK: I move, Mr. President, that the recommendations in the President's address be referred to the Council for action.

Motion seconded and carried.

Dr. E. C. Thrash moved to adjourn. Motion seconded and the House of Delegates adjourned at 10:25 p. m., to reconvene on Thursday, May 9, at 8:00 a. m.

THIRD MEETING

Thursday, May 9, 1929

The House of Delegates reconvened and was called to order at the Dempsey Hotel, Macon, Georgia, at 8:15 a. m., by the President, Dr. C. K. Sharp, Arlington.

ROLL CALL

The Secretary stated that he held the signed roll of the following thirty-eight Delegates and Councilors, and moved that this be accepted as the official roll call for this meeting.

Ralph H. Chaney, Richmond County.
W. A. Selman, Vice-Councilor 5th District.
W. E. Mobley, Bibb County.
W. A. Mulherin, Richmond County.
C. W. Roberts, Fulton County.
R. L. Miller, Burke County.
M. M. Head, Councilor 6th District.
B. T. Wise, Sumter County.
G. Y. Moore, Councilor 3rd District.
J. C. Jenkins, Hart County.
P. H. Askew, Berrien-Cook Counties.
Frank R. Mann, Telfair County.
Marion T. Benson, Fulton County.
T. F. Harper, Randolph County.
R. C. Cross, Barrow County.
J. R. Clements, Mitchell County.
E. S. Peacock, Washington County.
G. Lombard Kelly, Richmond County.
O. W. Roberts, Councilor 4th District.
S. J. Lewis, Councilor 10th District.
Ernest F. Wahl, Thomas County.
E. C. Thrash, Fulton County (Ex-President).
Dan Y. Sage, Fulton County.
C. L. Ayers, Councilor 9th District.
W. H. Garrison, Habersham County.
W. F. Reavis, Ware County.
J. D. Applewhite, Bibb County.
A. S. M. Coleman, Councilor 11th District.
E. C. Thrash, Fulton County (E-President).
W. R. Dancy, President-elect.
J. H. Baxter, Turner County.
James N. Brawner, Fulton County.
W. E. McCurry, First Vice-President.
M. A. Clark, Parliamentarian.
C. E. Waits, Fulton County.
J. A. Redfearn, Dougherty County.
President Sharp and Secretary Bunce.

The motion of the Secretary to accept the roll call was seconded and regularly carried and the President declared the House of Delegates duly constituted for the transaction of business.

THE PRESIDENT: The Chair, in order to expedite business, will rule that no man can speak more than once on the same subject, and will ask that you try to condense your remarks as much as possible.

ACTION ON ADDRESS OF PRESIDENT-ELECT

Dr. W. R. Dancy explained that he had been instructed to prepare an address outlining his ideas for the coming year, and requested an expression of opinion on those matters in order that he might shape the policy for the ensuing year. The work must be characterized by cooperation, and if there

was a difference of opinion this must be settled so that all could work for a common end. He did not know what was customary but thought that in the past a committee had been appointed to consider reports and report back to the House of Delegates. If no action was to be taken he saw no reason why any President-elect should ever present an address in the future.

This matter was discussed by Drs. Simmons and Clark.

Dr. Simmons moved that the House of Delegates endorse all of Dr. Dancy's suggestions in regard to administrative action not involving the expenditure of money.

Seconded by several, and discussed by Drs. Clark and Reavis, Mulherin and Dancy. Adopted.

Group Insurance

Dr. E. C. Thrash moved that the House of Delegates endorse group insurance insofar as individual members wished to take out this protection, each individual to deal with the insurance companies themselves.

Motion seconded and carried.

Woman's Auxiliary Students Aid Fund

DR. W. R. DANCY: I have one recommendation that I expect to make this morning to the Woman's Auxiliary. It will put them to work if they adopt it, but I do not wish to put anything before them unless it meets with the approval of the House of Delegates. The sum and substance of my proposal is that the Woman's Auxiliary develop a fund which I expect to reach $100,000. They do not have to wait until they get this amount before carrying out the plan, however. The plan is this: We have a good many young men in the smaller towns of Georgia who are trying to rise in the world, who want medical education but have no means for it. The Woman's Auxiliary is to finance these young men in securing medical education, with the understanding that they must attend the medical schools in Georgia, and agree to practice in the State of Georgia for at least five years. They must be of Georgia parentage, and must be interested in obtaining an education in medicine. It will require $800.00 a year for one of these young men to go through medical school. I suggest in my address that they start this plan this year, if they put in but one man. This money is loaned to the men and it is suggested that they give them outright the first year's money, but that they are to pay interest on the other three years' funds and pay back the principal as soon as they are able to do this from their practice.

The experience of other bodies doing similar work is that only about 60 per cent of the men pay back what is loaned to them. Nevertheless, they will be doing a splendid work, they will have a distinct objective, and I should like to know whether such a plan if presented before the Woman's Auxiliary will be acceptable to this organization. I should like to go before them and state that I have the hearty approval of the House of Delegates.

Dr. Marion T. Benson moved that this plan be endorsed by the House of Delegates.

Motion seconded and unanimously carried.

Extension Work of Medical Schools

Dr. W. A. Mulherin, for the Committee on Scientific Work, presented the following report:

Mr. President, Fellow Members of the House of Delegates:

As one of the purposes of our Association is to "extend medical knowledge and advance medical science," it is the belief of your Committee that medical extension work, as conducted by the University of Georgia Medical School and Emory University Medical School, is an important contributing factor to the attainment of this end.

Therefore, we recommend that the Medical Association of Georgia heartily endorse and actively support medical extension work, as done by the two universities in our state.

We further recommend that the Committee on Scientific Work of this Association act in an advisory capacity when called upon by the duly authorized persons representing the Emory University and University of Georgia medical extension work.

W. H. MULHERIN
C. W. ROBERTS,
ALLEN H. BUNCE.

Dr. James N. Brawner moved that this report be accepted and the recommendations adopted.

Motion seconded and unanimously carried.

Auditing Committee

Dr. C. L. Ayers, Chairman, presented the following report:

May 9, 1929.

We, the Committee appointed for the purpose of auditing the books of the Secretary-Treasurer, have done so and find all accounts and vouchers correct.

A. S. M. COLEMAN,
O. W. ROBERTS,
C. L. AYERS.

On motion regularly seconded and carried this report was accepted as read.

REPORT OF COUNCIL

Dr M. M. Head, Chairman.

DR. HEAD: The Council through the day yesterday took up the matter of raising the dues. It is already apparent and the thorough knowledge of the House of Delegates that the Medical Association of Georgia has for the past two years lost about $1,000.00 a year. We are having now some very good legislative work, and the Council recommends that the dues be raised $2.00 annually, which will make the dues $7.00. We may be able to save a little money out of this for an emergency fund.

The Council would like to have the House of Delegates pass a ruling that the Committee on Public Policy and Legislation spend the necessary amount of money to carry on its work. The Committee does not now know just what will be necessary, but we feel they should be authorized to spend as little as possible.

CONSTITUTION—Amendment, Article X.—Funds and Expenses

DR. MARION T. BENSON: I move that the House of Delegates approve the raise of dues to $7.00, and that we adopt the report of the Council in full.

Motion seconded by Dr. C. E. Waits and unanimously carried.

The President requested the First Vice-President, Dr. W. E. McCurry, to take the Chair.

ACTION ON ADDRESS OF DR. EUGENE E. MURPHEY

DR. E. C. THRASH: I move that the Medical Association of Georgia appoint a committee to cooperate with the national commission appointed to survey the cost of medical care, the purpose of which will be to come into Georgia and investigate the cost of medical care in our state. (Motion seconded).

Dr. J. W. Simmons offered as an amendment that the matter be referred to the Committee on Public Policy and Legislation. (Motion seconded).

DR. J. D. APPLEWHITE: We had this matter up before our local society. Every man, I think, agreed to undertake the work in his community, and we have such a committee as Dr. Thrash moved be appointed for the Medical Association of Georgia. I think it would be a wonderful thing if we could take this up for it is a good thing for the medical profession and the health departments engaged in the work. If we can have it referred to some committee we already have, or to some special committee, I think it will be a splendid thing. If we do not have such committees appointed there might be some confusion.

THE SECRETARY: The previous speaker has explained to you what has been done. Your Secretary attended this meeting unofficially and we have written to every County Society in the State where this work is to be undertaken, asking the County Societies to appoint committees to cooperate. I think, as Dr. Applewhite said, the Medical Association of Georgia, or some committee such as we have, might cooperate with the National Commission. However, since we have Dr. Fishbein with us this morning I think we might hear from him.

DR. MORRIS FISHBEIN: The great probability is that the experiment to which the previous speaker referred is only one of many experiments that will be undertaken in Medical Care. That Commission has already outlined more than fifty projects to be undertaken in the next five years. The whole question of who pays for protective medicine, the question of the amount invested in medical practice, the question of how many quacks a person sees before he goes to a doctor, are being investigated by economists, social workers, health officers and many others. Two of the most important studies are being undertaken by the headquarters office, for there we have the only accurate list of physicians that exists in the United States. We are undertaking the investigation of the investment in medical practice and the return from medical practice. This is of the greatest importance.

One of the investigations being undertaken by the economists is a house-to-house canvass to ascertain how many quacks a person sees before they consult a doctor, how much money they spend for medical care, including that spent at the corner drug store, and the amount spent for physicians and in the hospital. This is the first attempt to find out how much is spent in the United States for disease.

I have no doubt it would be helpful to have a liaison committee appointed to look into this. Many physicians will not answer any questions except what the government makes them answer in the income blanks. When we got out our blanks we got only about a 20 per cent return. We should get 100 per cent, for this is for the good of the physician and for the good of the public generally. The liason committee will have the duty of impressing the profession of the State and the people that this is not an attempt to pry into their affairs, but an honest effort to get at the cost of medical care.

To me, the great idea is to distribute the

(Continued on Page 486)

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

OCTOBER, 1929

MEDICAL RELIEF IN DISASTER

To the Officers of the County Medical Societies:

Every section of our country, sooner or later meets with some great and distressing misfortune. Tornadoes, hurricanes, cyclones, fires, earthquakes, floods, and many other calamities have visited various parts of our great country during recent years. These bring very distressing results, with loss of houses, life and injuries to many of the survivors.

To care for these physical injuries there are national relief organizations like the American Red Cross. Efficient and well organized as they are, they require twenty-four to seventy-two hours to get into action and function. Realizing this fact and appreciating the unfortunate victims are suffering during the meantime, the American Medical Association, through a special committee investigated and studied the situation, and stated that the reason for suggesting immediate relief in disaster, is the confusion and often the breakdown which occurs immediately after any great disaster before the state and national organizations, which normally take charge of such situation, arrive on the scene.

This organization can function immediately in case of disaster by reason of it having medical service designated by the State Medical Association acting in turn under the approval and request of the American Medical Association. They can organize the situation and administer medical relief. These medical men will continue their work only until constituted authorities, of the state or national organization arrive to assume charge. The Medical organization is not intended to take permanent charge. It will transfer its work and authority to those representing organized relief as soon as they arrive. No conflict of authority is intended or anticipated. It will furnish immediate medical relief only during the interval between the disaster and the arrival of organized relief and cease to function after their arrival.

The American Medical Association has requested the officers of each State Medical Association to organize such an organization as mentioned above, with the President of the State Association as President for his state, and with the President of each County Society as President of the County he serves.

With this plan in mind the officers of each County Society in Georgia have been requested to organize "Medical Relief in Disaster." It is expected that the President of each County Medical Society will appoint a group of five to ten men to serve on this board or committee, to supply immediately medical relief in any major disaster in his county.

This request for organization has been carried out by a number of county medical societies which action is highly appreciated, but there are still many who have not fulfilled the request. It is to these I wish to earnestly appeal for cooperation. The present officers are working industriously to make your State Medical organization the best in the United States, and to accomplish those objectives which will be of great benefit to the profession, and others which will aid humanity. We must have an organization of which you and I will be proud. To obtain this we must ask and have your support in every particular. Medical Relief in Disaster is needed. It may be required in your county at any moment. Will you not fulfill the request of the Medical Association of Georgia and organize. Which means for the President of your County Society to appoint a group of five or ten physicians to immediately serve under him in any grave disaster, and then to ask the Red Cross to keep in storage in two or three places in the county a large supply of emergency dressings for your use.

Do this now and then notify the President and the Secretary of the Medical Association of Georgia that this board of physicians for Medical Relief in Disaster has been formed.

Appreciating in advance your interest and earnest fulfillment of this request.

Fraternally,
WM. R. DANCY, M.D., President.
Medical Association of Georgia.

CONSTITUTIONAL FACTORS IN DISEASE

During the latter years of the nineteenth century and the first years of the twentieth century the attention of the medical world was largely focused on the brilliant discoveries in the sciences of bacteriology and pathology. The general etiological and pathogenetic laws relating to specific diseases and revealed in the laboratory were considered of value in the analysis of disease. At present the medical world is in the throes of the age of mechanical methods of precision in diagnosing disease. However, it seems that the art of clinical medicine has not been entirely forgotten and that all factors entering into the accurate diagnosis of disease are gradually gravitating to their respective places of importance and usefulness.

The study of constitutional pathology is again occupying a significant place in the minds of clinicians. Human constitution as defined by Draper, Allen and Spock (1) "should connote that aggregate of hereditarial characters, influenced more or less by environment, which determines the individual's reaction, successful or unsuccessful, to the stress of environment.' Whether certain characteristics are "expressions of qualities inherent in the germ plasm and transmitted through the chromosomes from generation to generation or whether they are imitative in origin is difficult to determine." Certain anomalies in development may be isolated and single and have very little clinical value. If these cases are studied carefully usually multiple anomalies will be found indicating "a more complex functional and evolutionary imbalance." Draper et al. state that "family inheritance is concerned far more with tissue systems than with details of structure." This observation is supported by clinical experience. It is a common experience of clinicians to observe in a given family several cases of disease of the glandular, nervous, cardiovascular, genito-urinary, or hematopietic systems respectively. Diseases of metabolism are notoriously familial in occurrence. Recent medical literature has been rich in reported studies of familial and constitutional disease. Dr. Harold M. Bowcock (2) reported the study of a family in which eighteen members showed the presence of a reducing substance in the urine in the absence of any symptoms of diabetes. Dr. Aldred Scott Warthin (3) makes the following statements based on the study of 2,011 thyroid glands: 1. "Exophthalmic (Basedow's) goiter,, 'toxic goiter,' 'hyperthyroidism' and "toxic Adenoma' present always the pathologic picture of hyperplasia of the primitive lymph nodes of the thyroid, hyperplasia of the thymus and other anatomic stigmata of the thymiclymphatic constitution. In addition they present certain constitutional peculiarities of their own." 2. Baselow's or Graves' disease. 'toxic goiter' and 'toxic adenoma' are pathologic reactions potentially predetermined in the individual at birth by virtue of his constitutional anomaly." The presence throughout the thyroid gland of "hyperplastic primitive lymph nodes with germinal centers showing lymphoid exhaustion determines the existence of the underlying constitutional anomaly."

The almost simultaneous development of the same disease in identical twins who present identical congenital anomalies would seem to indicate an hereditary or constitutional factor. Predisposition to a given disease may be latent and remain below the clinical horizon until the occurrence of some intercurrent infection. Constitutional inadequacies are "expressed by widely varying clinical conditions in different members of the same family." Instances are often seen of rheumatism, cardiac disease, hypertension and cerebral hemorrhage in different members of the same family. Asthma, eczema, hay fever, urticaria and migraine are often seen in the various members of a family. Certain nervous affections seem to have a definite familial predilection. While the relative place of constitutional pathology in clinical medicine has not been determined, the correlation of potential disease with clinical conditions offers hope in the progress of medicine.

M. S. D.

(1) Draper, George, M. D., Allen, Grace, A. B., Spock, Jane C. Studies in Human Constitution. VI Clinical Genetics. J. A. M. A., 92. 2149-2153, June 29, 1929.

(2) Bowcock, Harold M., Familial Glycosuria. Report of a Family with Eighteen Cases of Glycosuria. Annals of Internal Medicine. Vol. 2, No. 9, 923-931. March, 1929.

(3) Warthin, Aldred Scott, M.D., Phd., L.L.D. The Constitutional Entity of Exophthalmic Goiter and So-called Toxic Adenoma. Ann. Int. Med. Vol. 2, No. 6. 553-570. Dec., 1928.

OBLIGATIONS TO THE PROFESSION

No fair minded man will deny that there are certain duties of citizenship to the body politic and in like manner there is an obligation incurred in the enjoyment of the privileges afforded by scientific medicine wrought by the efforts of altruistic heroes-heroes "not having received the promises" of material rewards. No man proves himself worthy of such privileges but efforts should be none the less lacking for his own sake.

While frequently unrecognized every conscientious and capable physician has something of value to offer, but his diffidence makes him neglect a training that would finally bring about the ability to make such a contribution. Success so called in the medical profession is perhaps well nigh one hundred percent in the hands of the mediocre talents for according to Edison perspiration is more important that inspiration. While individualism is still of paramount importance, it is not inconsistent with a spirit of cooperation and physicians should cultivate a greater degree of affiliation in the matter of contacts and interchange of clinical studies. There is stored up in the experience of every active physician valuable truths lost to the world and to himself also because he has failed to record and interpret such observations. The first duty of all is a direct performance of a faithful and efficient service to the patient which is usually compensating in every way. Then the time comes when he would like to do more but finds himself handicapped to the point of discouragement. This leads us to say that every physician should keep better records and endeavor to make contributions to the general good and in the attempt he will himself become the greatest beneficiary for no man knows all of that he has known. There is no contribution worthy of the man that can be written "off the reel" and with mediocre talents no worthy paper should be completed within a year or two for there is no incentive to greater interest in current medical literature than having several papers in the course of preparation. Once having attempted to write a paper on any subject creates a continued interest in that subject thereafter. Writing papers should primarily be a subject of personal interest and secondarily a matter for publication. There is some virtue in half baked contributions to medical literature in that great good redounds to the authors and may lead to further contributions of value.

It should be remembered that it is not physically possible for editors to publish all worthy papers.

—COMMUNICATED.

PARTNERSHIP GENERAL PRACTICE

This article is concerned with a restricted group of two or more physicians serving a community in general practice and is not to be confounded with the group or clinic as generally understood. It must be apparent to all that a partnership of two or more kindred spirits in the practice of medicine, at least in the smaller communities, must be an ideal way to practice medicine and infinitely better for the physicians concerned than to practice as rivals in the community. The older practice of medicine has always been looked upon as largely a personal matter in which confidence in the physician was the most important. In these days of scientific medicine, this personal equation, while still a matter to be reckoned with, is not any more considered all-important.

Service to the community is the all-important matter. This can best be rendered by a system that will produce the best results with the least delay and inconvenience, and with a minimum of effort. Let us assume a two-physician community in which the tributary trade territory is a ten-mile radius. Practicing separately each physician may have a patient in the same certain neighborhood, ten miles out, requiring daily attention, requiring the efforts and time of both to attend, whereas, if the two physicians are united in their efforts, one can make the several calls with little more time and effort than is required to attend to one patient. In the meantime the other partner can minister to patients in another neighborhood or attend to calls in town or office. Everybody concerned is benefited, a prompter service results, with less expenditure of effort, and more people can be served.

Daily consultations in the office in the absence of the patients are possible and profitable to physicians and patients alike. In emer-

gencies requiring an assistant or an anesthetist, calling the other partner is most convenient and agreeable.

People knowing that two competent physicians work as a unit will be drawn to them in greater numbers when medical service is sought, thus increasing the income. Two men working together can successfully conduct, if they will, an emergency hospital suited to the needs of the community. They can the more fully equip themselves with x-ray and other laboratory apparatus and become more proficient in using it. In such a partnership each one should be able to qualify in some special line of work in addition to the usual routine and in this way they increase their usefulness to the community and incidentally increase the income. It is likely that two or more men practicing together have less annoyance from bad accounts than would either practicing singly.

The opportunities for rest, recreation, postgraduate study, attendance on medical society meetings, alternately, if need be, is easy as compared to the man who practices by himself.

The country doctor is not passing; but he must adapt himself to more up-to-date methods of procedure to attain the best results professionally, socially, financially and in the hearts of the community, and the outline above indicated offers a solution of the problem. The country doctor must not much longer stand in the light of his own possible progress.—Editorial, The Nebraska State Medical Journal, Vol. XIV, No. 9, September. 1929.

DISTRIBUTION OF ENDEMIC GOITER IN THE UNITED STATES

Studies conducted by the United States Public Health Service during recent years indicate that the distribution of goiter in the United States as disclosed by numerous thyroid surveys, parallels in general, the goiter findings which were recorded among the drafted men examined during the World War.

There are manifestly wide variations in the methods of determining thyroid enlargement. The classification of various degrees and types of involvement also range within wide limitations. Uniform procedure is a necessity if findings in different sections of the country are to be compared.

Based upon the occurrence of goiter, wholesale prophylaxis by means of the use of small doses of iodine either as iodized salt or otherwise for endemic goiter is apparently not required in all states.

Individual thyroid surveys disclose foci of endemic goiter in localities not previously regarded as being located in goitrous territory.

Resurveys are desirable for the purpose of learning the extent and character of changes occurring either under natural conditions or after prophylaxis has been instituted.—United States Public Health Service.

REPORT OF THE HOUSE OF DELEGATES OF THE MEDICAL ASSOCIATION OF GEORGIA

(Continued from Page 482)

overhead. That may be a conclusion arrived at in advance of the study. I think it will be found that the best step will be to distribute the overhead, and not in any way to reduce the income of the individual physicians. No more money is going to the doctors than they should have—not even a fair return on the investment the doctor makes in medical practice.

I was particularly interested in your discussion on the raise in dues. I have attended the meetings of twenty-six state medical societies in the last four years, and most of them are raising their dues. Those of the Georgia Association are about the lowest in the United States. Anything you pay for medical organization is not too much, provided you get your money's worth. It is impossible to accomplish anything unless there is money to do it with, and if wisely spent the amount of $7.00 or $8.00 for dues is nothing at all.

DR. M. A. CLARK: I would like to hear from the Chairman of the Committee on Public Policy and Legislation, if this would burden his Committee too much.

DR. C. E. WAITS: We have plenty of work but would be willing to cooperate with the committees already appointed, or it might be an advantage to have a special committee.

This question was further discussed by Drs. Clark, Simmons and Thrash.

The amendment offered by Dr. Simmons, that the matter be referred to the Committee on Public Policy and Legislation, was put to a vote and carried.

The motion of Dr. Thrash, as amended, was then put to a vote and carried unanimously.

ACTION ON EXPENSES OF INVITED GUESTS

Dr. M. M. Head, Chairman of the Council, stated that since the recommendation regarding the raise in dues had been adopted, the Council recommended that the expenses of invited guests be paid.

Dr. M. A. Clark moved that this recommendation be adopted.

Motion seconded and unanimously carried.

PROPOSED CHANGE IN BY-LAWS

Dr. M. A. Clark gave notice of the following change in the By-Laws: To be added to Chapter IV, Section 2, following the words "known as President-elect," the following: "and shall be ex-officio member of the standing committees, and shall make recommendations at the next annual session."

EXPENSE ACCOUNT FOR PRESIDENT

DR. DAN Y. SAGE: It has been called to my attention that no expense account is provided for our President.

I move that the House of Delegates recommend that the actual traveling and hotel expense of the President when on Association business be paid during his term of office. (Motion seconded).

Dr. M. A. Clark called attention to the standing rule of the Association that $150.00 be given each year to the President to help defray his expenses, and expressed the opinion that those who are elected to the presidency of the organization are always glad of the honor and never expect to be fully remunerated for the expenses attached to the office.

Discussed by Drs. Miller, Sage and Dean.

Dr. E. C. Thrash moved that the House of Delegates recommend to the Council that the rule pertaining to the expenses of the President be rescinded, and that in lieu thereof the President shall submit an itemized expense account each year, the Association to pay the actual traveling and hotel expenses.

Motion seconded and carried.

ACTION ON AMENDMENTS TO BY-LAWS

The Secretary brought up the proposed amendment to Chapter VII, Section 8 of the By-Laws.

To amend Chapter VII, Section 8, by striking the entire paragraph and substituting the following:

"When a member in good standing in a component county society moves to another county in this state, he shall be given a written certificate of these facts by the Secretary of his society, without cost, for transmission to the Secretary of the society in the county to which he moves. Pending his acceptance or rejection by the society in the county to which he moves such member shall be considered to be in good standing in the county society from which he was certified and in the Medical Association of Georgia to the end of the period for which his dues have been paid."

Dr. Bunce explained that this was an exact copy of the model Constitution and By-Laws issued by the American Medical Association.

Dr. R. L. Miller moved the adoption of this amendment. Motion seconded by Dr. J. N. Brawner.

Discussed by Drs. Clark, Reavis and Brawner, following which the motion was put to a vote and carried.

DR. R. L. MILLER: In view of the fact that we have two committees that overlap, I move that we omit the Committee on Health and Public Instruction, and let the work of that Committee be done by the Committee on Public Policy and Legislation. (Motion seconded).

Discussed by Drs. Thrash, Mulherin and Clark.

Dr. Clark offered as an amendment to this motion that those members of this Committee whose term had not expired should serve with the Committee on Public Policy and Legislation until their term shall expire. (Seconded).

Dr. Miller accepted this amendment, which was put to a vote and carried. The motion as amended was then put to a vote and unanimously carried.

MINUTES

THE SECRETARY: I move that we adopt the minutes of our proceedings of this morning as they will be published in the Journal.

Motion seconded and unanimously carried.

THE CHAIRMAN: Is there anything further to be considered by the House of Delegates at this time? If not, a motion to adjourn is in order.

On motion of Dr. Clark, seconded by Dr. Brawner, the House of Delegates adjourned at 11:10 a. m., *sine die.*

ALLEN H. BUNCE,
Secretary-Treasurer.

Next Annual Session
MEDICAL ASSOCIATION OF GEORGIA
Augusta, May 14, 15, 16, 1930

WOMAN'S AUXILIARY
MEDICAL ASSOCIATION OF GEORGIA
OFFICERS

President—Mrs. Marion T. Benson, Atlanta.
President-elect—Mrs. Chas. C. Harrold, Macon.
1st Vice-President—Mrs. J. A. Selden, Macon.
2nd Vice-President—Mrs. H. D. Allen, Sr., Milledgeville.
3rd Vice-President—Mrs. J. A. Redfearn, Albany.
Recording Secretary—Mrs. Lee Howard, Savannah.
Corresponding Secretary—Mrs. W. H. Garrison, Clarkesville.
Treasurer—Mrs. Chas. E. Waits, Atlanta.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Editor—Mrs. C. W. Roberts, Atlanta.

DELEGATES TO A. M. A. (1930)

Mrs. William R. Dancy, Savannah.
Mrs. C. C. Hinton, Macon.

DELEGATES TO S. M. A., MIAMI

Mrs. J. Cox Wall, Eastman.
Mrs. Ralston Lattimore, Savannah.

WORK OF AUXILIARY

To the Presidents of County Auxiliaries, Medical Association of Georgia:

So frequently the officers and members of the Auxiliary ask what work they can do, so I am sending you a list of the activities of other Auxiliaries in hope that it will give you some idea and be of help to you. You may be interested in some other work suited to your community. Let us know about it, it may help others.

First, we should devote our time to work on the necessity of which we all agree, namely: Self education, education of our membership on the fundamental principles of health promotion and disease prevention which are evolving from scientific medicine; education of the public along the same lines in order to speed up the organization and efficient administration and of full time scientific health departments, especially in rural districts.

Some work that has been done in our county auxiliaries:

Assist P.-T. A. and Women's Clubs in health work.

Equip a bed at some hospital.

Equip a negro pre-school clinic for Health Department.

Help secure the adoption of Ellis Health Law in your county.

Interest parents in health lectures, show health films obtained from our Health Film Library in Macon.

Award prizes in schools for best original health posters.

Stress the periodic health examination of children on May Day. Adults on their birthday.

Examination of servants: This is very important. Cooks, nurses and laundresses should be required to give a clean bill of health. Most epidemics start with the negroes, because they will not report such cases if they can avoid it. Create sentiment in favor of demanding a health certificate from all servants. In time we can make this a law in our State.

Co-operate with other organizations in immunization against dipththeria, typhoid fever, smallpox.

Every first grade school child physically fit in your community, would be a good slogan for your organization.

Sale of Christmas seals.

Interest the teachers in the Health Magazine, Hygeia; get them to use the health plays that are given each month in Hygeia, and to continue your efforts to place Hygeia in every home, as it is the leading health magazine in the United States and is published by the American Medical Association. Appoint a Hygeia Chairman and send her name to me.

A Milk Fund can be provided for undernourished children.

Layettes can be made for needy mothers.

Books and toys taken to the children's ward at hospitals and a story hour provided for the convalescents.

Social Activities

Picnics, buffet suppers, Christmas parties, informal dances, bridge tournaments, etc., have been arranged by many Auxiliaries to provide recreation for their Medical Association. These have always been reported a success.

Special Notice

State dues, seventy-five cents (75c) per capita, should be sent to Mrs. Chas. E. White, 1105 Lullwater Road, N. E., Atlanta. The fiscal year closes April 1st, also a complete list of your membership, designating your officers. Will be glad to have this information as early as is convenient.

Mrs. C. W. Roberts, 1085 St. Charles

Place, N. E., Atlanta, is Editor of our page in the State Medical Journal. Send to her anything of interest in your work, also the reports of your meetings. Be sure and see our page each month.

Mrs. J. T. Selden, of Macon, Chairman of the Health Film Library, has an interesting article in the September issue. Don't miss it.

Wishing you very much success,

Yours very sincerely,

MRS. MARION T. BENSON,

President Woman's Auxiliary Medical Association of Georgia.

Atlanta, September 8, 1929.

Committee of the Students Educational Fund

Chairman—Mrs. R. H. Pate, Unadilla.

First District—Mrs. Ralston Lattimore, Savannah.

Second District—Mrs. W. S. Cook, Albany.

Third District—Mrs. R. H. Pate, Unadilla.

Fourth District—Mrs. Enoch Callaway, LaGrange.

Fifth District—Mrs. Frank Boland, Atlanta.

Sixth District—Mrs. C. C. Hinton, Macon.

Seventh District—Mrs. S. L. Whitely, Cedartown.

Eighth District—Mrs. Paul Holliday, Athens.

Ninth District—Mrs. Lee Rogers, Gainesville.

Tenth District—Mrs. W. W. Battey, Augusta.

Eleventh District—Mrs. J. E. Penland, Waycross.

Twelfth District—Mrs. A. T. Coleman, Dublin.

NINTH DISTRICT MEETING

The Woman's Auxiliary to the Ninth District Medical Society met on September 18th at the home of Mrs. C. B. Almand, Winder. Twenty-seven members and five visitors were present.

Mrs. W. H. Garrison, District Manager, presided.

Program was as follows:

Devotional—Mrs. Jno. Wood, Winder.

Welcome—Mrs. E. R. Harris, Winder.

Response—Mrs. E. M. McDonald, Jefferson.

Minutes of previous meeting were read and adopted.

Five County Auxiliaries reported active work.

Address, entitled "The Prevalence of Goiter in Georgia," by Dr. T. C. Davison, Atlanta.

Dr. William R. Dancy, Savannah, President of the Medical Association of Georgia, was introduced and gave a very interesting talk on the Student Aid Fund for medical students. The fund to be raised by the Woman's Auxiliary.

Presidential address by Mrs. Marion T. Benson, Atlanta.

The meeting adjourned and the members of the Auxiliary joined the doctors at the Granite Hotel, where luncheon was served.

Respectfully,

MRS. MYRAN ALLEN, Secretary.

MRS. M. B. ALLEN HOSTESS TO WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION

On September 5th, Mrs. M. B. Allen was hostess to the Woman's Auxiliary of Jackson County, at her home in Hoschton. Fragrant flowers artistically arranged added more charm to the attractive home, where the guests received a most cordial welcome.

The President, Mrs. M. B. Allen, presided over the meeting.

After the reading of the minutes, dues were collected for the ensuing year.

An important letter of appeal for a definite work for the Auxiliary to labor for was read by Mrs. Lancaster of Hoschton. The money to be raised by subscription, each member giving $1.00.

Mrs. C. B. Lord of Jefferson, was elected delegate to the 9th District Medical meeting to be held in Winder, September 18th.

Officers for the coming year were elected, as follows: Mrs. A. A. Rogers, Commerce, President; and Mrs. C. B. Lord, of Jefferson, Secretary and Treasurer.

At the close of the meeting, Mrs. J. C. Bennett introduced Mrs. Frances Taylor and Miss Emma Long of Athens, daughters of Dr. Crawford Long.

Mrs. Taylor responded with a most impressive talk, and told of her distinguished father's love for Jackson County. It was indeed a pleasure to have these visitors with us.

The genial hostess served a delightful salad and sweet course, assisted by her two lovely young daughters.

Those enjoying the pleasures of this occasion, were: Mesdames C. B. Lord and J. C. Bennett, of Jefferson; Mrs. Frances Long Taylor, Misses Emma Long, Birdsong, and Mrs. Hubert, of Athens; Mesdames Allen, Loyd Lott, Bell, Lancaster, Misses Myrtice Allen, McConnell, Virginia and Alberta Allen.

Cyrus C. Sturgis and Raphael Isaacs, Ann Arbor, Mich. (Journal A. M. A., Sept. 7, 1929), report on three patients in whom whole desiccated hog stomach and hog stomach defatted with petroleum benzin produced a satisfactory hematopoietic remission in pernicious anemia.

BOOK REVIEWS AND ABSTRACTS

BOOK REVIEWS

Clinical Medicine, by Oscar W. Bethea, M.D., Ph.G., Professor of Therapeutics, Tulane Graduate School of Medicine; Professor of Clinical Therapeutics, Tulane School of Medicine, New Orleans, La. Octave volume of 700 pages. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, $7.50.

In the preface to this book Dr. Bethea makes the following remarks:

"Most of the literature on the Practice of Medicine is based on work in fully equipped hospitals or in the homes of the wealthy, where every advantage of modern science is available; while, as a matter of fact, the great majority of patients must be treated in homes and under conditions offering limited facilities to aid the physician in his efforts. It has been with this larger group constantly in mind that the author has taught and that this book has been written, and it is practically the lectures given by him to undergraduate and post-graduate students during recent years at Tulane University.

"An effort has been made by the author to put into one volume of moderate size the latest and most generally accepted information as to the diagnosis and treatment of about one hundred of the most common diseases coming within the province of Internal Medicine. Unproven theory has been omitted almost entirely."

In trying to limit any text book on medicine to about one hundred common diseases the author may be criticized by some readers. However, the selections for this book are admirably chosen.

There are many personal references to cases or experiences in treating diseases that illustrate practical points and hold the friendly attention of the reader. An exhaustive discussion of each disease is not undertaken. While this book may not prove of great assistance to the specialist in internal medicine it will certainly be of definite value to those in the general practice of medicine.

MARK S. DOUGHERTY, M.D.

"Tuberculosis" And How To Combat It. By Francis M. Pottenger, A.M., M.D., LL.D., F.A.C.P. Second Edition, cloth, 266 pages, with 44 chapters. C. V. Mosby & Co., St. Louis, Mo. Price $2.00. 1928.

This is a book that every sufferer of tuberculosis and his friends should read. The Author has the book well outlined, and discusses briefly every subject that is of interest toward the welfare of the sufferer of this disease. All questions that might come into the mind of a patient are answered in a manner that can be easily understood. The book is very complete and one wonders how so much valuable information can be covered in so small a volume. If every practitioner who treats tuberculosis would put one of these books in the hands of his patient just as Joslin does with his diabetic manual, it would prove to be a great aid in successful handling of the patient.

T. L. BYRD, M.D.

"Manson's Tropical Diseases," A Manual Of The Diseases Of Warm Climates. Ninth Edition. By Philip H. Manson-Bahr, D.S.O., M.A., M.D., D.T.M. And H. Cantab., F.R.C.P. Lond.

Physician to the Hospital for Tropical Diseases, London, the Albert Dock Hospital and Tilbury Hospital; Lecturer at the London School of Hygiene and Tropical Medicine; Member Colonial Medical Research Committee; Lecturer on Tropical Diseases to the London Hospital, the West London Post Graduate College, and the North-Eastern Post Graduate College; Consultant in Tropical Medicine to the Royal Air Force; Corresponding Member of the Societe de Pathologie Exotique; Examiner in Tropical Medicine to the Conjoint Board of the Royal College of Physicians and Royal College of Surgeons, England, and to Cambridge and Hongkong Universities. Cloth, with 889 pages, 23 colour plates, 12 half tone plates, 401 figures in the text, 6 maps, and 34 charts. Price $11.00. William Wood and Company, New York, 1929.

The title of this book would lead one to believe that only diseases peculiar to the Tropics are discussed, but such is not the case, instead it deals with all the common and most important diseases that are prevalent in the warmer climates. The author states in the introduction that the name of the volume is more convenient than accurate. The first 320 pages are devoted to the fevers, such as Malaria, Typhus and allied fevers, Fevers of the Enteric groupe. Tularemia, Heat-stroke, and many others of no less importance that every practitioner meets with in daily practice. Section III devoted to the diseases of the abdomen, such as the Dysenteries. The chapter on Amoebic Dysenters (E. Histolytica) is very complete, ably covering the etiology, symptomatology, pathology and the latest methods of treatment. In the Appendix Section B. Laboratory Methods are discussed which adds considerable value to this book. This book is outlined in a very desirable manner, discussions brief and to the point and one does not have to read the entire volume to obtain the information desired. This book should be a part of every practitioners armementarium.

T. L. BYRD, M.D.

Gonorrhea and Kindred Affections by George Robertson, M.D., F.A.C.S., and Edward Armin Shumann, A.B., M.D., F.A.C.S. Published by D. Appleton & Co.

The book is divided into two parts. The first part written by Dr. Livermore deals with gonorrhea in the male, chancroid, and Verruca Acuminata. The subject.

I think, is very well covered. The first two chapters dealing with the history, etiology, diagnosis, and pathology of gonorrhea in its several stages in the male is complete and well written, and certainly easily understood. It offers, however, very little of anything new, but simply reviews certain tests and observations which have been made by other authorities and reported in other works of this kind.

The subject of gonorrhea is then divided into its two stages according to the usual classifications—acute and chronic. Dr. Livermore's diagnosis of gonorrhea is made by the same methods which have been used by Urologists for some time past. His treatment of acute gonorrhea is certainly conservative, and he makes use of agents now commonly used and also used acriflavine in a very weak solution, which it not as universally used as other measures which he mentions. I do not believe that any patient under his plan of treatment could possibly suffer any dire consequences, and it is very likely that if his treatment were adhered to we would see less of the late complications of acute gonorrhea.

His management of chronic gonorrhea is also along well used and conservative lines. The complications of gonorrhea, which he mentions are those which are commonly seen by Urologists, and are treated in the usual manner. Certain newer measures are mentioned, such as Diathermy, Vaccines, etc. He gives complete descriptions from the literature mentioning the claims made by advocates of these forms of treatment, does not condemn the measures, but invariably states that in his hands they have not produced the results which have been claimed for them.

Chancroid and Verruca Acuminata are dealt with briefly. His treatment of chancroid by infiltration with copper sulphate with high frequency current, using a vacuum electrode is, I think, the ideal method, and has been rather universally adopted by Urologists and has been reported elsewhere. He gives only one page of Verruca Acuminata, but recommends measures which will undoubtedly lead to a cure.

The second part of the book, written by Dr. Shumann, dealing with gonorrhea in the female and infections granulomata is of value more to the Gynecologist than to the Urologist. His observations and suggestions for treatment are along the line which has been frequently discussed and very little new is offered.

The chapter on Granulomata is of interest for the reason that the subject is not so well understood, and diagnoses are frequently missed. I believe that if his methods are followed some of these mistakes would be avoided.

On a whole, the book is a review of time honored observations concerning gonorrhea in both male and female. However, the information is condensed into an available form, and the book will certainly be of value to the general practitioner, and to the student, and will be read with considerable interest by the urologist. It is well and simply written and the authors are to be congratulated upon making the subject so easily understood.

Atlanta. M. K. BAILEY, M.D.

Diagnostic Methods and Interpretations in Internal Medicine, by Samuel A. Loewenberg, M.D., F.A.C.P., Assistant Professor of Clinical Medicine, Jefferson Medical College; Assistant Physician to the Jefferson Hospital; Visiting Physician to The Philadelphia General Hospital, The Northern Liberties Hospital and the Eagleville Sanatorium for Consumptives; formerly Assistant Professor of Physical Diagnosis at the Medico-Chirurgical College and the University of Pennsylvania. With 547 illustrations. Some in colors. 1032 pp. Philadelphia, F. A. Davis Co., Publishers, 1929. Price $10.00.

Julia Marlowe throughout her long and notable career on the stage prefaced each season with several weeks of vocal culture under an elocution teacher in New York City. One does not have to be very old to recall the beauty of her voice. In the same way, a physician, even of equal reputation in his line, may profit from an occasional review of fundamentals such as physical diagnosis.

"Despite the trend of medicine towards extreme specialization, the author has ventured to compile a textbook of general information upon medical diagnosis from the standpoint of the rapidly disappearing 'general practitioner.' His reason for bringing forth a book of this type is his belief that no one can become a real specialist until he has practiced general medicine long enough to enable him to view human ills from the standpoint of "*the person* affected by an illness" rather than "*the illness* affecting a person." It is not the author's intention to advocate retrogression in medicine or a reversion to an older type of "jack of all trades and master of none," but rather to encourage more masters whose judgment has become mature by reason of the experience gained both from general practice and from a chosen specialty. Because of the interrelation of all parts and organs in the human body no one part or organ alone can be treated successfully unless proper consideration is given to the organism as a whole. Therefore the specialist, no matter how expert he may be in his own field, must nevertheless have a knowledge of general medicine.

" . . . . This book aims to cover the field of diagnostics in internal medicine. . . . The respiratory and cardiac systems are covered fully and minutely" and well in about one-third of the book, which includes a good section on electrocardiography. In the one page on gynecology it was pleasant to see the admission that it is hard to feel normal tubes and ovaries.

The chapter on the nervous system (by M. K. Meyers) is excellent. Study of these seventy-seven pages will hardly make a competent neurologist of the average man, but should enable him to diagnose many conditions, and to appreciate the need for an expert when it arises. An interesting section is devoted to physical examinations as applied to industry, life insurance, health preservation, detection of malingering, etc. The book is illustrated with many fine photographs and a number of clear diagrams. These features justify any doctor in acquiring the volume.

It is however of uneven merit, and some parts seem to have been hastily thrown together. For example, no mention is made of the loss of vibratory sense in pernicious anemia. One-third of the section on exophthalmic goiter is devoted to a color reaction on the patient's serum: to the clinician simpler (and probably more reliable) methods of diagnosing goiter are surely more than twice as valuable as this scientific curiosity. In the course of a few pages are found the words bulimia, acoria, parorexia, pica and merycismus. When the psychiatrists are simplifying their jargon surely an internist should not recall such terms from their innocuous desuetude.

One would gather that, with a history of epigastric pain, hematemesis, dyspepsia, cachexia, anemia and achlorhydria, in the presence of a palpable epigrastric mass, he can make a diagnosis of cancer of the stomach. The advantage to the patient, or to anyone else, in making the diognosis at this stage of the game is beyond the understanding of this reviewer. From the days of Hippocrates to those of Roentgen this was probably the best that could be done, but certainly a large proportion of gastric carcinomas can be diagnosed earlier now, and a book of the pretensions of this one should disseminate knowledge of means of doing so.

L. M. B.

BOOKS RECEIVED

Materia Medica and Therapeutics Including Pharmacy and Pharmacology, by Reynold Webb Wilcox, M.A., M.D., LL.D., D.C.L., Lieutenant Colonel, Auxiliary Reserve, United States Army; Consultant in Medicine to St. Mark's Hospital; Consulting Physician to the Nassau Hospital; to the Ossinning Hospital; and the Eastern Long Island Hospital; Consulting Internist to the New Jersey State Hospital; Professor of Medicine (Retired) at the New York Post-Graduate Medical School and Hospital; Formerly President of the American College of Physicians and of the American Therapeutic Society; of the Society of Medical Jurisprudence; of the Harvard Medical Society and of New York Association of the Medical Reserve Corps of the United States. Twelfth edition revised in accordance with the United States Pharmacopoeia X and the National Formulary V, with Index of Symptoms and Diseases. Contains 690 pages. Publishers: P. Blakiston's Son & Co., Inc., 1012 Walnut Street, Philadelphia, Pennsylvania.

NEWS ITEMS

Dr. Iago Galdsten, Secretary of the Medical Society of the County of New York, has sent out reprints of a full page advertisement which appeared in the New York Times of August 16th, announcing a campaign which the Greater New York Committee on Health Examination is to wage during the month of November on behalf of the medical profession of Greater New York. Reprints and additional information may be obtained by writing the Secretary at 2 East 103rd Street, New York City.

Dr. O. D. King, formerly of Carnesville, has moved to Carrollton and opened offices in the First National Bank Building.

Dr. R. C. Kemp, Conasauga, Tennessee, a member of Murray County Medical Society, is spending several months in New York City taking a post-graduate course at the New York Post-Graduate Medical School and Hospital.

The Tri County Medical Society met at the office of Dr. W. C. Hays, Colquit, on September 11th. Scientific papers were read by Dr. C. K. Wall, Thomasville; Dr. Gordon Chason, Bainbridge; Dr. M. A. Fort, Bainbridge.

The Hall County Medical Society met recently at the home of Dr. H. S. Titshaw, Gainesville. Dr. C. J. Wellborn, Gainesville, President, presided.

Dr. J. W. Thurmond announces his association with Dr. A. J. Kilpatrick for the practice of obstetrics. Offices at 407 Seventh Street, Augusta.

Dr. W. K. Stewart, formerly of Union Point, has been elected Commissioner of Health for Jefferson County.

Dr. J. P. Kennedy, Atlanta, will continue his work as City Health Officer for the protection of the health of the school children of Atlanta through periodical health examinations and correction of defects.

The members of the Jackson County Medical Society and their families were entertained by the Woman's Auxiliary at a picnic on August 22nd at the Potter Bridge on the Jefferson-Winder highway.

Dr. J. R. Garner, Atlanta, Chief Surgeon for the A. B. & A. R. R. et al, delivered an address before the Alabama Association of Railroad Surgeons at Birmingham on September 4th.

Drs. J. H. Goodwyn and C. W. Hilliard announce their association for the practice of medicine and the removal of their offices to the First National Bank Building, Carrollton.

The American College of Surgeons held its nineteenth annual Clicinal Congress at Chicago, October 14-18. An intensive program was planned to make this home-coming event the greatest in the history of the College.

Dr. Shelton Palmer Sanford announces the opening of his office at 110 Medical Arts Building, Atlanta. Practice limited to internal medicine.

Dr. William S. Goldsmith announces the resumption of practice. Office at 726 Hurt Building, Atlanta.

Dr. M. T. MacAvelia, following two years post-graduate study in urology, announces the opening of his office at 733 Hurt Building, Atlanta. Practice limited to urology.

Dr. G. T. Banks, formerly of Pine Log, has removed to Fairmount and will continue the practice of medicine at the latter location.

The Ninth District Medical Society met at Winder on September 18th. The scientific program was made up of the following titles for papers: "Hypertention, Its Causes and Clinical Significance," by Dr. Laetus Sanders, Commerce; "Urethracele, A Cause of Cystitis," by Dr. Grady N. Coker, Canton; "Neurology," by Dr. E. T. Gibbs, Gainesville; "Report of Cases," by Dr. H. W Birdsong, Athens; "Goiter," by Dr. T. C. Davison, Atlanta; Address, by Dr. William R. Dancy, Savannah, President of the Association.

The Randolph County Medical Society met in the Woman's Club Room at Cuthbert on October 3rd. Dr. M. A. Fort, Bainbridge, read a paper, entitled Plasmochin in the Treatment of Malaria.

The Seventh District Medical Society met at Marietta on September 25th. The scientific program consisted of papers, entitled: Address by Dr. William R. Dancy, Savannah, President of the Association; Diagnostic Methods by Dr. Allen H. Bunce, Atlanta; Treatment of Certain Surgical Conditions of the Thorax by Dr. D. C. Elkin, Atlanta; Milk From the Pediatrist's Standpoint by Dr. M. Hines Roberts, Atlanta; New Growth of the Skin by Dr. Jack W. Jones, Atlanta; Some G. U. Problems by Dr. Omar F. Elder, Atlanta; Anesthesia by Dr. T. J. Collier, Atlanta; Pellagra by Dr. J. D. Middlebrooks, Powder Springs; The Crippled Child by Dr. Theodore Toepel, Atlanta; Backache in Women by Dr. Walter R. Holmes, Atlanta.

The Spalding County Medical Society met at the Griffin Hospital, Griffin, on September 17th.

The Washington County Medical Society met at Sandersville on September 19th.

The Floyd County Medical Society met in the Armstrong Hotel, Rome, on September 20th.

MARRIAGES

Dr. George H. Alexander, Forsyth, married to Miss Miriam Strickland, Concord, October 9, 1929.

OBITUARY

Dr. John R. Bradfield, McRae; Louisville Medical College, Louisville, Kentucky, 1888; aged 61; died at his home on August 21, 1929, after a long illness. He was born and reared in Troup County. Dr. Bradford had practiced medicine at McRae for twenty-three years. He was a prominent physician and a member of the Methodist church. Surviving him are his widow, four sons, John, William, Joseph and Miriam Bradford, all of McRae; three daughters, Mrs. W. O. Brooks, McRae; Mrs. V. H. Smith, McRae; and Mrs. S. E. Neeley, Yazoo City, Mississippi. Funeral services were conducted from the Methodist church by Rev. J. C. G. Brooks.

Dr. Sheddie Usher, Savannah; Member; University of Georgia Medical Department, Augusta, 1905; aged 51; died at his home, 12 West Harris Street, on September 2, 1929. He was born and reared in Effingham County. Dr. Usher had practiced medicine in Savannah for eighteen years and was one of the most prominent physicians of southeast Georgia. He was a member of the Masonic Lodge, Georgia Medical Society and the American Medical Association. Surviving him are his widow; two daughters, Misses Sarah and Sheddie Usher; mother, five brothers, and four sisters. Interment in Bethel Lutheran church cemetery near Springfield.

Dr. J. J. Anderson, Hawkinsville; Atlanta College of Physicians and Surgeons, Atlanta, 1912; aged 40; died suddenly at his home on August 11, 1929. He was born and reared in Pulaski County and spent his entire life in that community. Surviving him are two sisters, Mrs. H. W. Cole, Pine Bluff, Arkansas; Mrs. S. W. Turner, Vidalia; two brothers, C. R. Anderson, Hawkinsville, and C. C. Anderson, Huntsville, Alabama. Funeral services were conducted by Rev. P. T. Holloway and interment in Orange Hill cemetery.

Dr. Lindsay C. Warren, Griffin; University of Georgia Medical Department, Augusta, 1900; aged 52; died at the home of his mother at Louisville on September, 1929. He was held in high esteem by the people of Griffin and surrounding community. Surviving him are his widow, two daughters, Misses Mary Louise and Frances Warren; one son, Benj. Warren, all of Griffin. Funeral services were conducted by Rev. H. S. Smith from the First Methodist church and interment in Oak Hill cemetery.

PRESIDENT'S TOUR*

Southern Medical Association Meeting
Miami—November 19, 20, 21, 22

Schedule for the President's tour from Savannah, Ga., to Miami, Fla.

November 18, 1929

Miles		
0	Leave Savannah	7:00 A. M.
84	Arrive Brunswick	9:30 A. M.
	Stop in Brunswick for incidentals one - half hour.	
	Leave Brunswick	10:00 A. M.
70	Arrive Jacksonville	12:00 Noon
	Stop in Jacksonville one hour for lunch.	
	Leave Jacksonville	1:00 P. M.
41	Arrive St. Augustine	2:15 P. M.
	Stop in St. Augustine one-half hour.	
	Leave St. Augustine	2:45 P. M.
31	Arrive Bunnell	3:45 P. M.
26	Arrive Dayton Beach	4:30 P. M.
	Spend night at Daytona Beach.	

Second Day
November 19, 1929

	Leave Daytona Beach	8:00 A. M.
15	Arrive New Smyrna	8:30 A. M.

51	Arrive Cocoa	10:00 A. M.
22	Arrive Melbourne	10:45 A. M.
48	Arrive Ft. Pierce	12:00 Noon
	Half an hour for incidentals.	
	Leave Ft. Pierce	12:30 P. M.
59	Arrive West Palm Beach	2:00 P. M.
	One hour for lunch.	
43	Leave W. Palm Beach	3:00 P. M.
23	Arrive Ft. Lauderdale	4:30 P. M.
	Arrive Miami	5:15 P.M.

*The presidents, officers and members of the Medical Associations of Alabama, North Carolina, South Carolina and Tennessee are invited to join the President's Tour at Savannah, Georgia, on November 18th at 7:00 A. M.

ACCEPTANCE

Your invitation to be a participant in the President's Tour to Miami, Florida, to attend the annual session of the Southern Medical Association; leaving Savannah, Georgia, at 7:00 A. M., November 18, 1929, is accepted.

Name .....

Address .....

Type and name of car .....

Size of tires .....

Service car will accompany tour and every one is expected to use it if necessity demands. Mail your acceptance to Dr. William R. Dancy, President, 102 Jones Street, West, Savannah, Georgia.

UNDULANT FEVER

Walter L. Bierring, Des Moines, Iowa, (Journal A. M. A., Sept. 21, 1929), reviews and analyzes 150 cases of this disease and discusses its clinical history and treatment in detail. An accepted agglutination titer and the demonstration of *Brucella melitensis* variety *abortus* in pure culture in the blood stream should always be required for a positive diagnosis. For the present, symptomatic treatment offers the most for the patient with undulant fever, his activities being regulated by keeping him at rest in bed as long as the febrile state persists, administering sedatives for insomnia, headache and other distressing symptoms, and, most important, giving an abundant nourishing diet. The convalescence is often prolonged over a long period and careful attention is necessary by means of phychic encouragement, physical therapy and other stimulating measures to insure a complete return to the normal state of health.

ISOLATION OF TAIL OF PANCREAS IN DILABETIC CHILD

The operation described by Geza de Takats and R. M. Wilder, Chicago (Journal A. M. A., Aug. 24, 1929), was designed to promote hyperthropy of the islet tissue of the pancreas and thereby increase the insulin output from the gland. This operation was performed on a child with severe diabetes with results that are encouraging.

AMERICAN ILLUSTRATED DICTIONARY

2500 additional new terms.

100 additional illustrations.

1427 pages, with 525 illustrations.

Contains hundreds of new words to be found only in this book.

15th Edition—Price $7.00 net; with thumb index $7.50 net.

Send your order to

FRANK B. NEELY,

Representative

Box 864, Montgomery, Ala.

The Tulane University of Louisiana

GRADUATE SCHOOL OF MEDICINE

Approved by the Council on Medical Education of the A.M.A.

Post-graduate instruction offered in all branches of medicine. Courses leading to a higher degree have also been instituted.

A bulletin furnishing detailed information may be obtained upon application to the

DEAN
GRADUATE SCHOOL OF MEDICINE
1551 Canal Street
New Orleans, La.

EAGER & SIMPSON

SURGICAL CORSETS
ABDOMINAL SUPPORTS
UPLIFT BRASSIERES, ETC.

8 N. Forsyth St. Atlanta

Walnut 4972

Lac-Bismo
(HART)

See Description, Journal A.M.A.
Volume XLVII, Page 1488.

A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water. Each fluidrachm contains 2½ grains of the combined salts in an extremely fine state of subdivision.

MEDICINAL PROPERTIES: Gastric Sedative, Antiseptic, Mild Astringent and Antacid.

INDICATIONS: In Gastro-Intestinal Diseases, Diarrhoea, Dysentery, Cholera-Infantum, etc. Also suitable for external use in cases of ulcers, etc.

E. J. HART & CO., Ltd.
Mfg. Chemists
New Orleans

As a General Antiseptic

in place of

TINCTURE OF IODINE

Try

MERCUROCHROME-220 SOLUBLE

(Dibrom-oxymercuri-fluorescein)
2% Solution

It stains, it penetrates and it furnishes a deposit of the germicidal agent in the desired field.

It does not burn, irritate or injure tissue in any way.

Hynson, Westcott & Dunning
BALTIMORE, MD.

LET US COLLECT YOUR SLOW ACCOUNTS FOR YOU.

COMMISSIONS AS LOW AS 25%. NO OTHER CHARGES.

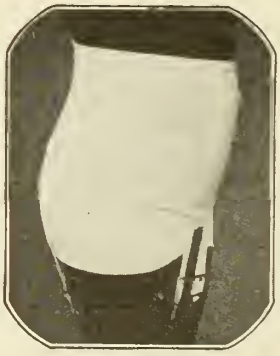
Endorsed by American Medical Association and State Societies. References: Bradstreets; Chamber of Commerce; Commerce Trust Co. or publishers of this journal. Satisfied clients everywhere.
SEND FOR LIST BLANKS

Physicians & Surgeons Adjusting Association
RAILWAY EXCHANGE BUILDING. KANSAS CITY, MO.

SITUATIONS WANTED

WANTED: Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians', 320 N. Michigan Ave., Chicago, member The Chicago Association of Commerce.

"STORM" *The* NEW "Type N" STORM *Supporters*



"TYPE N"

With long laced back and low extension upon hips: The reinforcing band attached in front at median line, also fastened in back. Hose supporters instead of thigh straps.

Takes Place of Corsets

Gives perfect uplift and is worn with comfort and satisfaction. Many variations of the "Type N" Belt provide support in Ptosis, Hernia, Obesity, Pregnancy, Sacroiliac Strain, etc.

Each Belt Made to Order *Ask for Literature*

Katherine L. Storm, M.D.
Originator, Owner and Maker
1701 Diamond St., Philadelphia, Pa., U.S.A.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XVIII November ~~October~~, 1929 No. ~~10~~ 11

THE RADIOLOGIST*

ROBERT DRANE, M.D.
Savannah

A general paper outlining the possibilities and the limitations of the radiologist seems at this time unnesessary, but the number of patients referred with some impracticable request prompts this effort.

A radiologist is one who studies or makes use of radiant energy. As applied to medicine, he is one who uses radium or the roentgen-ray in the treatment or diagnosis of disease. Although there is no prescribed course of study, there is a growing feeling in the profession that such should be the case before one qualifies as an expert and practices in this field. The Medical Society of the County of New York has adopted rules as to laboratories (Radiology—March, 1927). Improvements in machinery have fortunately or unfortunately rendered the technique of radiograms an easy matter. Many of the diagnoses are obvious, so why may not every man be his own roentgenologist? The answer is that the field is too large for any man busy in his own specialty to keep in touch with the developments which are taking place; an untrained eye is prone to overlook pathology represented on the film which is not anticipated; therefore, some knowledge of the physics and biochemistry of radiant energy is necessary to safeguard the patient. Lastly, each town has its criminal lawyer who is awaiting an opportunity to charge neglect, should one fail to recognize an obscure fracture or lesion. The responsibility is too great for an untrained man to assume.

The question of the relative value of roentgenography and fluoroscopy is often raised. The fluoroscope has advantages in the study of the lungs, heart, diaphragm, and intestinal tract, but without films, all early tuberculosis and many other lesions would be overlooked. One is never justified in the diagnosis of fractures with the fluroscope alone. Too many escape detection. When the part examined permits, two or more films taken at right angles should be made, but when this cannot be done, stereoscopy may be relied upon. We are neglecting our patients when we take only one view. Although it is often of advantage to set fractures with the aid of the fluroscope, it carries an element of danger and should not be done routinely. It is wise to check all fracture reductions with films.

There are certain frauds which have appeared in some of the large cities. Laboratories often conducted by technicians will sell stock to nearby physicians. A dividend is declared, the amount of which to each is proportional to the number of cases referred. Others charge the referring physician a certain fee. The physician charges his patient what he wishes or can collect. These laboratories send the finished films to the physician who makes the diagnosis to the patient. Thus the patient is not getting what he pays for—the opinion of a specialist. These same films in the hands of the unscrupulous are often the evidence in favor of an operation. The ideal practice is for the roentgenologist to render his opinion in writing to the referring physician. Unless requested, he should not suggest treatment, although often his opinion is of much value. The roentgenologist should file all film and copies of his reports. While no court has determined the ownership of films, (The photographer is the owner of his negatives—Corliss et al. vs. Walker Co., et al.—64 Fed. 280), the opinion of the roentgenologist is based upon his films and, since he is held responsibile, he must be able to produce them.

Patients should come to the roentgenologist

*Read before the Medical Association of Georgia, Macon, Ga., May 9, 1929.

at the request of a physician who has carefully examined them. He should give us an idea of his problem and we should use our discretion as to the examinations necessary. They should make an appointment, as many examinations require preliminary preparation. It is astonishing how many patients come without appointment with the requests, "Please x-ray," or "x-ray side." We do not have the time to go thoroughly into all phases of the patients' complaint. The physician should rely upon us to confirm or deny one of several possibilities. However, having found certain examinations negative, it should be within our province to suggest and perform other examinations necessary for a diagnosis. On too many occasions to be funny have we been called to the hospital to "x-ray teeth," when the patient had no teeth. We have also been called to examine the urinary tract of a patient in acute uremia. It was evident that this patient had not been seen by her physician. Emergency x-ray examination of accident cases are frequently requested at night. The doctor, in bed, receiving our report remarks, "I will hold it over until morning." We like to work and work hard, but we want to know that we are cooperating and not being made a convenience of, a placebo for the family.

The fact that the roentgen-ray makes many diagnoses should not cause one to become careless or lazy in the study of cases. The history and development of diagnostic methods are too interesting to neglect. Respect alone for our antecedents should demand that we use to the best of our ability all that they have handed down to us—a careful history, inspection, palpation, percussion, and ausculation. Such a study will often save a patient expensive x-ray examinations.

A complicating factor is the significance which the public places upon the "x-ray." The tendency of the court to call one neglectful makes it imperative that all fracture cases be filmed. It is economy for corporations and insurance companies to refer all questionable traumatic patients to roentgenologists. One unfavorable judgment for an overlooked fracture would pay for hundreds of routine examinations. With a negative roentgen report, patients recover more quickly.

What should be our attitude toward court work? We must testify upon those cases which develop from injuries which we have previously examined. It is my idea that we state the abnormalities seen on the films, and then tell the traumatic or pathological conditions which they might represent. Do not be professional witnesses and try to win cases. Often our testimony is very damaging to the side which is paying us. Even so, we must not mince the truth. Roentgenology must hold a place of respect.

Opinions differ in the treatment of hopeless malignancy. Personally, I do not favor "carrying them on" so that the patient might feel that something is being done. Often, radiation therapy relieves pain, bleeding and discharge. When we accomplish this, we are doing much for their comfort, but when a short series of treatments convinces us that nothing is gained, I feel that we should stop the treatments. There is a certain psychology among patients. The numerous failures of surgery in the olden days, when extensive malignancies were operated on, reacted unfavorably. They felt that to have a cancer meant death. As results improve, they submit more readily to operation. Radium and deep therapy are passing through the same stage. Only exceptionally are we referred anything but the inoperable case. The statistics of numerous clinics are proving better results with radium and deep theapy in carcinoma of the cervex uteri than with surgery. We must learn that it is not a surgical (operative) disease.

A hurried resume of the possibilities of roentgenology in the different systems of the body is in order:

1. Fractures and dislocations: x-rays are useful and necessary. A single view often fails to disclose a fracture. The spine offers difficulties. The fifth lumbar vertebra is notorious for its congenital abnormalities. It is most important to distinguish between these and trauma. It is known that a degree of spondylolithesis or sacro-iliac sprain, most painful to the patient, may not

necessarily be demonstrated upon our films. Injury to the cartilage is not shown.

2. Arthritis: x-rays show the atrophic and hypertrophic changes, though the causative agent, with the exception of the tubercle bacillus, and occasionally the gonococcus, cannot be named.

3. Diseases of the Bones:
   a. Inflammatory.
   b. Neoplastic.
   c. Constitutional.

a. Osteomyelitis is only rarely recorganized in its early stages by the x-ray Macroscopic bone changes must first take place. Syphilis is shown as periostitis, gumma, dactylitis, and osteomyelitis.

b. Neoplastic bone disease, benign and malignant, primary and metastatic, are all shown and should be recognized. No patient with carcinoma of the breast or prostate should be subjected to operation without preliminary chest, lumbar vertebra, and pelvic examinations.

c. The constitutional diseases with bone changes are scurvy, rickets, osteitis deformans, osteitis fibrosa, achondroplasia, osteogenesis imperfectafi and osteomalacia.

Special procedures are necessary in the diagnosis of brain and spinal cord lesions. It is usually necessary to inject air or opaque fluid, which is the work of the neurologist. One must be very careful to distinguish between fractures of the skull and the grooves for the vessels. Sinus and tooth possibilities are known to you all. Tooth work is overdone.

The gastro-intestinal tract offers the most interesting field. Spasm, diverticula, ulcer, cancer, and adhesions may be recognized. Judd has observed a localized duodenitis which had been diagnosed as an ulcer by x-ray. We cannot definitely tell whether an ulcer is "healed." Gall bladder diagnosis after the administration of sodium tetraiodophenolphthalein, requires study and skill. Only five per cent of calculi are shown without the dye, while ninety-five per cent of renal calculi are shown. Pure urate calculi cast no shadows. Numerous intra and extra renal conditions may be confused with calculi.

The various lesions of the lung have no characteristic markings. A consideration of their distribution is all important. Tuberculous activity cannot be diagnosed from films alone. Mediastinal conditions offer much worry. Tumors are most often malignant, they tend to be lobulated. It is often difficult to distinguish between tumor and aneurysm. The acute cardiohepatic angle persists in fifty per cent of the cases of pericarditis with effusion.

The patency of the fallopian tubes may be demonstrated by the injection of gas or iodized oil. Pregnancy can usually be demonstrated after the fourth month. A limited amount of ray must be used. A certain dose injures the fetus; a larger dose causes abortion.

Pneumoperitoneum, though a dangerous procedure, demonstrates subdiaphagmatic conditions and adhesions between the abdominal viscera. It is not a popular examination.

In this brief way I have tried to show you that many of our diagnoses are most difficult. They require our best knowledge of anatomy. pathology, and physiology. A machine in your office, manipulated by a technician who has her training from the man who installed the apparatus, will produce indifferent films which, when interpreted by a poorly trained physician, often deny your patients knowledge which should be theirs.

The future of roentgenology is indefinite. Its therapeutic use will advance further than the diagnostic. Refinements in technique and probably new and as yet unknown tubes, with greater certainty, will handle superficial disorders. New methods of treatment must be devised for use on deep malignancy. In diagnosis, it is possible that a drug orally administered will be discovered which will outline the urinary tract just as the gall bladder is now shown. I believe that roentgenology as a specialty will suffer. This examination is too important and necessary an adjunct in diagnosis to be in the hands of one group. Internists, as such, will become fewer. In their place will appear diagnosticians specializing on the respiratory, genito-urinary, alimentary, and other systems. Each of these men will have at his disposal laboratory facilities for the tests peculiar to his needs, bacteriological, serological, etc., and each will

be a trained roentgenologist. It is too time-consuming and disconcerting to refer each patient to another man to solve the interesting point in question. The few patients who you cannot or will not handle will not be sufficient to support this specialty in the numbers which are now turning to it. More patients will be examined by the roentgen-ray, but, I am afraid, fewer will be examined by those really qualified to do this work.

DISCUSSION ON PAPER OF DR. DRANE

Dr. James J. Clark, Atlanta: I enjoyed Dr. Drane's paper very much, and can only amplify one or two points. There was an article in "Hygiea" last month, in which the question was asked, "Will the x-ray show an abscessed tooth?" The answer given was "No," very rightly, but the explanation underneath this was not understood by many men. If we will think of the infections in bone around teeth, and in acute osteomyelitis, and remember that all the x-ray will ever show is bone production or bone destruction, then we will know why the film is found to be negative in the early cases. This is often true in cases of toothache. Someone takes a picture and it is negative, but nevertheless the tooth will be infected. The tooth which is abscessed sufficiently to show destruction on an x-ray film is usually without pain, and for that reason the term "blind abscess" has been used. This is comparable with acute osteomyelitis in children. A child may be brought in with signs of swelling over the tibia, a high temperature and pain, but the x-ray film is negative. The bony process is negative as to signs of destruction. The reason is that the disease is too recent to register, and the film shows nothing abnormal. Therefore, in this type of case you must depend upon your clinical judgment, and if you believe there is an abscess open it up regardless of the x-ray findings.

In the examination of teeth, Dr. Drane said it is over-done. I think it is half done. The poorest x-ray films I see are those of the teeth. The majority do not show the apices of the teeth. I think such examinations should be well done and thoroughly.

Regarding the fluoroscopic screen, I am amused frequently by men going about and telling how much they can see under the fluoroscope. It is the consensus of opinion of men doing this work that by the time you can see enough on the screen to make a diagnosis in pulmonary tuberculosis it should be evident by clinical examination. However, the stereoscopic plate is different. That will bring out pathology that cannot even be suspected on the screen.

I know how Dr. Drane feels about the treatment of hopelessly advanced cancer. However, when we remember that these patients cannot get well and that when we take hope from them they have nothing to live for, I think such treatment is justified. It is my custom not to tell the patient but to tell the family that we cannot do anything to retard development of the growth, but if they wish we can put the patient under the x-ray tube and let him think something is being done for him. Only a very small fee, merely covering the time in the office, is charged. This is explained to the father, the husband or the wife, because we do not make any claim about doing any good, but we are often surprised at the improvement in the odor and the appearance in some of the sloughing malignancies. I believe it is worth while to treat such patients on that basis.

The last thing I wish to mention is that the dangers of this type of work should be emphasized. Many of us forget the terrible accidents that have happened in the past, and in the last four years there has been a gradual increase in x-ray burns. A doctor recently burned his own brother, and a patient was burned under the fluoroscope during an examination.

Dr. Robert C. Pendergrass, Americus: After hearing Dr. Drane's paper I have concluded that the radiologist has not a position but a job. I think the greatest field for usefulness in the future will lie in cooperation between the practitioner and the radiologist, no matter in what specialty. Just so long as we have the combination of the medical man or the surgeon referring a case to the radiologist without any information we will continue playing a game of hide-and-seek and will have poor work. Some knowledge of the clinical side of the case, coupled with a knowledge of the x-ray findings, is far more effective than when a diagnosis is made when the radiologist buries his nose in the x-ray film. We are treating patients and not machines, and we must use the human equation.

As to the value of negative findings, particularly in patients referred for conditions in the gall-bladder and stomach, the radiologist often fails to find what the physician suspects and too often the case is dropped right there. These negative findings should have a great value and should stimulate us to study

our cases more thoroughly, rather than relying upon laboratory diagnosis to end the whole story.

I wish to make an earnest plea to surgeons, physicians and pathologists, to act with the radiologists and give them an opportunity, so far as is practicable, to see the patients at the bedside and, when there is a fatal termination, in the autopsy room. We learn more from our mistakes than from correct diagnosis. If the surgeons will allow the radiologist to be present at the time the operation is performed, and let him see the pathology that is present which he interpreted or misinterpreted on the x-ray film, we will advance in x-ray diagnosis and will improve the whole situation.

Dr. Robert Drane, Savannah, (closing): I thank the gentlemen for their discussion, especially Dr. Clark for bringing out those details. I poorly stated what I said about the teeth. I refer to those cases which the doctor sends us in the end stages of arthritis, with deformed joints and so on, telling them that if the teeth are corrected their trouble will be over. Those patients come to us suffering a delusion, and I dislike to x-ray them and take their money.

Another problem is presented to us by patients who come bringing films made elsewhere, seeking our opinion. At times these films are poor technically. While the patient resents it, I feel that at all times we should advise a re-examination rather than attempt to read poor films. Some radiologists resent this stand on my part. If we should be dissatisfied with anything but technically good films, this difficulty would be obviated.

THE SESAMOID BONES, IMPORTANT FACTORS IN DEFORMITIES OF THE FIRST METATARSO-PHALANGEAL JOINT*

THEODORE TOEPEL, M.D.,
Atlanta

Deformities of this joint have received inadequate study; often they are undiagnosed, mismanaged and injudiciously treated.

In presenting this subject to you I will briefly review the gross anatomy of the normal foot, some physiology, and causes and treatment of the deformities.

The bones entering into the formation of the foot are: The seven tarsals, the five metatarsals, fourteen phalanges and two sesamoid bones under the head of the first metatarsal.

The ligaments are very numerous between the bones. Most of the muscles of the foot cross several joints and each of these joints is affected by contractions of the muscles crossing it. The nerve supply of all the muscles of the foot comes from two main trunks; the internal and external popliteals.

The physiology of the foot is complex, but in order to be brief I will mention only the physiology of the foot in standing and walking. Were the foot jointless except for the tibio-astragaloid its physiology would be much simpler than it is with no less than thirty-eight articulations.

The best standing position is where the two feet form a quadrilateral figure, that is, the centers of the balls of the feet and the centers of the heels form the corners of a square. To bring the transverse plane containing the center of gravity of the body over the strongest part of the bony structure and to keep it there with the least muscular exertion, we should place the foot at about a right angle with the leg. A man weighing 150 pounds and standing in low-heeled shoes may be said to transmit 100 pounds through the heels and 50 pounds through the forefoot.

In walking the progression of the step is developed from the heel to the sole in such a manner that the heel touches the ground first whereby in most cases the sole forms an angle of 35 to 45 degrees to the ground. It will be found that the outer border of the heel touches first. Now the outer border of the sole follows, the step being further developed toward the inner surface through the adjustment of the fan-like spreading of the metatarsal bones toward the second joint of the great toe, from here on to the end of the great toe the step is completed and the foot again begins its forward pendulum movement.

The flexor brevis hallucis arises, by a pointed tendinous process, from the inner part of the under surface of the cuboid bone, from the contiguous portion of the external

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1929.

Figure I
Enlarged sesamoid bones before operation.

Figure II
Both sesamoid bones removed.

cuneiform, and from the prolongation of the tendon of the tibialis posticus, which is attached to that bone. The muscle divides in front into two portions which are inserted into the inner and outer sides of the base of the first phalanx of the great toe, a sesamoid bone being developed in each tendon at its insertion.

These two sesamoid bones are small rounded masses, cartilagenous in early life, osseous in the adult. Contrary to the statement in Gray's Anatomy, I have found them oftener and larger in the female than in the male. They are invested throughout their whole surface by the fibrous tissues of the tendons of the muscle flexor brevis hallucis excepting upon the surface which lies in contact with the head of the first metatarsal and the base of the phalangeal bones over which they play.

Due to the great pressure which these two bones are subject to during walking, some anatomical peculiarities develop which are worthy of discussion. The head of the first metatarsal is in comparison with the heads of the other metatarsal bones flatter and the articular surface is larger and broader. One notices plainly two grooves in which the two sesamoid bones play. The medial or tibial groove is broader and deeper than the lateral or fibular groove. There is a strong ligament, the intersesamoid, which connects the two bones. It is of interest to observe another anatomical peculiarity of this joint. On account of ill fitting shoes the great toe is forced laterally so that on the medial side of the joint a bursa develops, which frequently connects with the joint capsul.

Robinson,. in 1915, after x-raying a patient's foot discovered, the outer (fibular) sesamoid bone projecting well into the space between the first and second metatarsals accompanied by a well marked dislocation of the head of the first metatarsal from its articulation with the base of the proximal phalanx of the great toe or in other words. a bunion.

(Harding) "After this lateral displace-

Figure III
Lateral view of foot, showing deformed foot and dislocated toes, with enlarged and dislocated sesamoid bones.

ment of both sesamoids has lasted some time and spells of inflammation have occurred, one or both of the bones hypertrophy while the outer one often becomes adherent to the metatarsal bone. When this attachment takes place a condition of partial hallux rigidity is produced which is usually painful."

My findings coincide with those of Robinson and Harding. In three of my patients, two women and one man, a dislocation of the head of the first metatarsal, caused by the slipping of the sesamoids, was clearly established, and by sesamoidectomy of both bones immediate and permanent relief was given. As a post-operative measure I always bandage as tightly as the patient will bear it, the head of the first metatarsal bone to the other four.

If we recall the anatomy of the sesamoid bones it is readily conceivable how easily the two bones may slip laterally. Imbedded in the two tendinous portions of the flexor brevis hallucis, connected by the strong intersesamoid ligament, a relaxed muscle with an uneven ground-surface and thin shoe soles will produce a dislocation of these two bones. This is manifested by a sharp pain, often attributed to a tight shoe, and only subjected to a careful orthopedic examination when the pain in the so-called bunion becomes unbearable. The patient has by this time made the usual rounds of the shoe doctors and chiropodists.

The other deformity of the first metatarsal-phalangeal joint, caused by the sesamoid bones is of more recent origin. As described

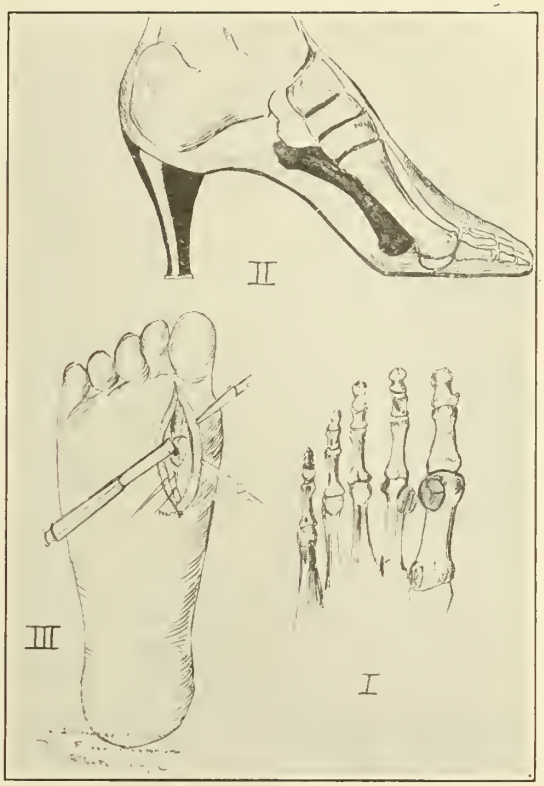


Figure IV
I. Enlarged and dislocated sesamoid bones.
II. Showing the cause of the deformity.
III. Operative procedure of removing sesamoid bones.
(Drawing by Miss Kennedy).

in a preceding paragraph, the os calcis bears the brunt of standing and walking and to repeat, the step is developed from the outer portion of the heel diagonally across the length of the foot to the end of the great toe. But raising the tarsal bones by high heels from three to four inches throws all the weight of the body to the heads of the metatarsal bones, especially the first one. The two sesamoid bones naturally and quite logically become the weight bearing points for the whole body. Encased in fibrous tissue, this becomes inflamed and thickened due to the constant trauma to which it is subjected. This inflammation is transmitted to the two sesamoids. The constant irritation stimulates growth and instead of being the normal size of coffee beans, these sesamoids develop to the size of hazelnuts, drawing their nourishment from the fibrous tissues at their margins. The dealer in shoes and the chiropodist are again the first ones consulted, and after the chiropodist has removed one layer after another of external cartilagenous tissues, and

all kinds of expensive shoes have been tried without relief, only then is the orthopedist called and with an x-ray will reveal to the patient the presence of the enlarged sesamoid bones. As in the other deformity so also in this one, sesamoidectomy is the only mode of relief.

To remove these bones I usually make an incision about two inches long over the middle of the head of the first metatarsal and a little beyond the base of the phalanx and with a moderate amount of dissecting the two sesamoid bones come into view and are then easily removed. In about ten days to two weeks the patient can under ordinary conditions bear some pressure on this part of the foot.

As a preoperative precautionary measure, never operate as long as there is any inflammation present.

526-7 Candler Building.

REFERENCES

Robinson, Capt. Herbert A. Etiology of Bunions. Military Surgeon. 62, 807, 1928.
Harding, M. C. Bunions. Southwest Medicine. 11, 360, 1927.

DISCUSSION ON PAPER OF DR. TOEPEL

Dr. James J. Clark, Atlanta: I have been interested in this subject for a long time and wish to add one or two points about feet, and bring to the attention of the men who are doing their own x-ray work several of the anomalies we encounter.

There are two anomalies which are often thought to be fractures. One is posterior to the astragalus, by name, ostrigonum, and is a small bone which usually unites with it but they are often separate. I have seen a good many of these that had been considered fractures. There is another called the os planum at lateral external margin of the foot that sometimes causes confusion. If you are in doubt as to whether or not there is a fracture this can easily be determined by making a film of the other foot.

We also have a rare condition of the scaphoid bone which is often interpreted as fracture. There may be a lack of union of the base of the fifth metatarsal which may look like a fracture.

Another point I wish to make is that of x-ray examination of sore feet. I have had several patients in the last few years who have had their tonsils removed, and thorough examinations made because of painful feet, and they had a small needle in the foot which they had stepped upon. Sore feet should be checked for the presence of foreign bodies.

Dr. Theodore Toepel, Atlanta, (closing): I am glad that Dr. Clark brought out these additional points. They are very valuable and show how necessary it is that doctors should be careful not to make light of sore and tender feet. As I stated in my paper, the foot is a very complicated part of the human anatomy.

One point I again wish to stress: Do not make the mistake, when a patient goes to you with tender feet, in sending him to a dealer in shoes or to a chiropodist. Have an x-ray made. Nine times out of ten it will be found that there is some deformity or some obstruction in the foot which neither a shoe dealer nor a chiropodist can discover. Do not be jealous of the orthopedist, send the patient to him and most likely the deformity will be discovered. You have no idea how many shoes are being fitted on sore feet that need operations, and how many chiropodists remove callous when bone should be removed. Doctors should recognize these mistakes and send their patients to the orthopedist.

ACUTE PERFORATION OF GASTRIC AND DUODENAL ULCERS*

J. C. PATTERSON, M.D.,
Cuthbert

Just what is the proper treatment of ruptured gastric and duodenal ulcers seems to be far from settled if one will study the literature on this subject.

There seems to be only one point of agreement among the authors as to the proper treatment and that is to operate early. Measures advocated vary from simple closure of the perforation to radical resection of the stomach. This latter view is expressed mostly by German writers, with a few in this country favoring this view.

The mortality also varies considerably as reported by different writers, ranging from 1 per cent to 56 per cent. Many writers, however, do not mention their mortality. From 1900 to 1925 the mortality rate at the Heidelberg Clinic was 39.47 per cent in 94

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1929.

cases. These high mortality rates for some reason seem to come from those who advocate the most radical procedures. Of course, these men who advocate such radical surgery as gastric resection are aiming at permanent cure of the ulcer. They believe that lesser methods, including even gastro-enterostomy, are followed by return of the ulcer or by gastro-jejunal ulcers.

But when we consider that even in non-perforated ulcers there is still much disagreement as to the best treatment, whether medical or surgical treatment, and, if surgical, whether simple excision of the ulcer with plastic closure, gastro-enterostomy or gastric resection, it is not strange that few men agree on the ideal treatment of perforated ulcers.

There are many methods and many advocates of each method; all admit that none are perfect or there would be only one method. The radical gastric resectionist claims that only by resection can recurrence be stopped, but there are over one hundred reported cases of recurrent ulcer following gastric resection. Balfour only recently reported twenty-five cases at the Mayo Clinic alone.

In view of the above facts, it seems to me that in an acute perforation which certainly is, as Moynihan says, an abdominal catastrophe with the patient always desperately ill, the simplest and quickest method of closing the opening and getting out of the abdomen is the safest. I can conceive of a case operated on early after perforation in which there was doubt of sufficient opening in the duodenum for food to pass after closure of the perforation. In such a case one would wisely do a gastro-enterostomy, but if in doubt I believe it should be left off. If there is more extensive surgery to be done, one can operate later when the patient has been better prepared for operation.

I have had only twelve cases of acute perforation; of course too few to be of any statistical value, but these cases all had simple closure of the perforation with either a purse string suture or interrupted sutures or both, with the omentum tacked over the line of suture, and with drainage of the abdomen. The operative mortality was nil. These cases so-called silent ulcers and at time of operation the patients were thought to have perforative appendicitis.

These cases (were operated on from 6 to 48 hours after perforation. They varied in age from 22 to 62 years old. Ten were men and two women. Nine white and three negroes. Ten Duodenal and two Gastric ulcers. Four were) so-called silent ulcers and at the time of operation the patients were thought to have perforative appendicitis.

Follow up reports of these cases showed that one patient died two years after operation from influenza; six said they were much improved and believed they were well; two said they did not follow their diets or instructions afterward and that they occasionally had pains in the abdomen but were better than before perforation, and one of these said that when he left off tobacco he was free from symptoms. Three could not be traced. All of these patients were put on Sippy regime after operation and were told to remain on the diet for two years.

One of these cases, while not an operative mortality, died four months later and deserves special mention: Ozie Johnson, mulatto negress, 32 years old, suffered perforated ulcer on Saturday, but was not brought to the hospital until Monday. On admission, her temperature was 100, pulse 140, respiration 40; she was in bad condition from general peritonitis. She was immediately operated on with very little hope of her recovery. The abdomen was full of pus and stomach contents. There was a small hole in the greater curvature of the stomach anteriorly through which fluid was escaping. This was closed by a purse string suture, the omentum was tacked over the suture, and the abdomen drained with one tube in the kidney pouch and another under the liver. After a few days with continuous hypodermoclysis she began to improve and the temperature became normal and she was eating all right. In about ten days, however, she began to have high fever and pain in the upper abdomen. A subphrenic abscess was suspected and found and was drained with a large tube after the manner of Oschner by resecting the tenth rib. About one quart of pus was obtained from

above the liver. She improved considerably after this; the pain left, but the pulse continued very rapid and endocarditis was thought to be present. She continued to gain strength slowly; she was on solid food and was feeling good, but after sixty days in the hospital continued to have fever, very rapid pulse, and no pain. Repeated x-ray and fluroscopic examinations and needle punctures failed to reveal any pus pocket. Finally she was discharged with a diagnosis of bacterial endocarditis. She lived two months after going home. No post mortem was obtainable. Thus while later dying, she lived four months following an operation for ruptured ulcer forty-eight hours old, which was remarkable, and I do not think the boldest surgeon would have advocated anything more than simple closure. Although this case could be classed as a mortality due primarily to a ruptured ulcer, it would argue for and not against simple closure.

In conclusion I wish to state that I have reported twelve cases of acute perforation of the stomach and duodenum with a plea for the average surgeon to do as little surgery as will safely close the opening and believe that he will save more patients than by tying to do a brilliant operation.

1. Desmarest, E.: The Diagnostic Value of Thoracic Pain in Perforated Ulcer of the Duodenum, Presse Med., 34:1211. (September 25), 1926.
2. Maconie, A. C.: Perforated Gastric Ulcer, British Med. Jour., 3358: 1162, (December 20), 1924.
3. Meyer, Karl A. and Brams, William A.: Acute Perforation of Gastric and Duodenal Ulcer, Am. Jour. Med. Sc., 171: 510-514, (April), 1926.
4. Vigyazo, Julius: The Diagnosis of Perforating Ulcer, Subcutaneous Emphysema as an Indication of Perforation, Zentralbl. f. Chir., 53: 1627-1632, (June 26), 1926.
5. Riess, P.: Tendency of Peptic Ulcer to Perforate, Zentralbl. f. Chir., 52: 2818-2819, (December 12), 1925.
6. Alherti, Olindo: Some Complications Secondary to Perforation of Gastro-Duodenal Ulcers. Radiol. Med. 14: 729-767, (September) 1927.
7. Dubs: Rupture of an Aneurysma Dissecans Under the Diagnosis of Acute Perforation of a Gastric Ulcer, Schweizerische medizinische Wochenschrift, 57: 628. (June 25), 1927.
8. Nixon, P. I. and Lowry, S. T.: Multiple Consecutive Perforated Gastrojejunal Ulcers: Report of a Case, Med. Jour. and Rec., 127: 584-586. (December 5), 1928.
9. Odermatt, W.: Operation for Perforated Ulcer of the Stomach and Duodenum, Schweizersche medizinische Wochenschrift, 56: 665-667. (July 10), 1926.
10. Soderlund, Gustaf: The Surgical Treatment of Perforating Gastric and Duodenal Ulcer. The Practitioner, 118: 171-181. (March), 1927.
11. Brenner, Edward C.: Perforated Ulcers of the Duodenum, Ann. of Surg., 86: 393-400. (September), 1927.
12. Beltran, Dr. Basil R.: Acute Perforation of a Gastric Ulcer, Surg. Cl. of N. A., 6: 270-272. (February), 1926.
13. Moynihan, Sir Berkley: Perforation of Gastric and Duodenal Ulcer, The Practitioner, 120: 137-174. (March), 1928.
14. Lewishon, Richard, M. D., New York, N. Y.: Late Results in Perforated and Gastro-Duodenal Ulcers. 855. Ann. of Surg. (June), 1928.
15. Gihson, C.: Acute Perforation of Gastric and Duodenal Ulcers. P. 219, Surg. Gyn. and Obs. J. A. M. A., 1928, XCI, 1006.
16. Addresses in Surgical Subjects by Moynihan, Sir Berkley J.—W. B. Saunders Co., Philadelphia, Pa.

RESULTS OF SURGICAL TREATMENT OF GASTRIC AND DUODENAL ULCER*

JULIAN K. QUATTLEBAUM, M.D.,
Savannah

There are many operations practiced for the relief of peptic ulcer. Each has its advocates whose enthuiastic support is usually equalled by their warm condemnation of other procedures. Large series of cases are submitted as evidence and a review of the literature on this subject confirms the saying that "statistics can be made to tell anything even the truth." It is probable that the truth told by the mass of statistics is that none of the operative procedures has proven entirely satisfactory. In fact it might be said that the proportion of unsatisfactory results is too large and failures after any type of stomach operation are not unusual. Other factors than the name of the operative procedure influence the results and it is well for any one attempting the surgical treatment of this disease to bear them in mind.

One of the fundamentals of good surgery is the careful selection of cases for operation. In no field is this more important than in the surgery of peptic ulcer. Border line cases, those with short histories, usually in young people, and acute cases with no complications are almost sure to be made worse if operated on. Patients with neurotic tendencies, those who refuse to cooperate in the matter of habits and diet, and those of highly nervous temperament are likely to be unimproved by surgery. On the contrary, if surgery is limited to those with a chronic ulcer with well established pathology and who have failed to gain relief after thorough dietary effort, other things being equal the outcome will be most happy.

The results will be favorably influenced also if surgeons will stick to the fixed rule of demonstrating the pathology before doing any operation on the stomach. Few surgeons have not been guilty of doing some type of stomach operation on cases where the ulcer could not be found. Yet that great authority,

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1929.

Sir Berkeley Moynihan (1) says that an ulcer to be present must be "seen, felt and demonstrated to a skeptical onlooker." Also Moynihan (2) says in his experience nine of every ten cases of unsatisfactory results following gastro-enterostomy are due to the fact there was no organic lesion to justify the operation. These statements should be remembered. I feel certain that stomach operations are being light-heartedly done each day on patients with no ulcer at all. The operation of gastro-enterostomy is being particularly abused. In my own limited experience I have been obliged to disconnect the anastomosis and restore the normal continuity of the alimentary tract to relieve a miserable condition. It is wiser to open the stomach and duodenum and search for the ulcer than to do a gastro-enterostomy where no ulcer exists.

The presence of the ulcer having been confirmed, the operation should be thoughtfully selected to fit the individual case. It is unwise to begin any operation with a fixed determniation to carry out a certain procedure regardless of what is found. To push any operation beyond its natural limitations is to invite disaster for no one operation suits all cases. For example, gastro-enterostomy gives utmost satisfaction in cases with pyloric obstruction but even its staunchest supporters hardly expect it to cure an ulcer high on the lesser curvature of the stomach. One should preserve an open mind, establish the facts and adopt the operation to the particular circumstances that are found, if he wishes to gain the best results.

A very frequent cause of disappointment following operative treatment for gastric and duodenal ulcer is associated pathology. Sources of infection are bound to make themselves known, and infected teeth, tonsils and sinuses must be attended to. The appendix should be removed whenever possible. Balfour (3) reviewing 1,000 cases of ulcer found operated on that the majority of those who failed to gain complete relief occurred in the 126 cases whose appendix had not been reremoved. A diseased gall bladder can hardly be expected to right itself through sympathy for the individual who also possesses an ulcer. Peri-colic adhesions, obstruction of the terminal duodenum by the root of the mesentery, or even an inflamed diverticulum may exist in the presence of an ulcer and unless recognized and properly dealt with will prevent the full recovery of the patient.

Only rarely does surgery fail to cure the original ulcer, however the operation itself may be the etiological factor in the production of new pathology. The most dreaded is new ulceration, usually in the suture line. This sequel certainly occurs but no one knows with what frequency. Men of great experience place it anywhere from 2 per cent to 33 per cent following gastro-enterostomy. It is hardly conceivable that such a wide difference of opinion could be as exists over this very point. It is agreed that it is less frequent after the radical stomach resections than following the more conservative operations, and this should be borne in mind in selecting the type of operation to be undertaken.

A ventral hernia is very likely to be a source of trouble. I feel that this condition has not been sufficiently emphasized. I have noted it in several instances. One case, much worse following operation, was completely relieved by repairing the large ventral hernia which had developed and others were made more comfortable by wearing a supporting belt. Post-operative adhesions which impair the function of the new stoma may bring about serious difficulties. Kinks and angulations may be produced and the motility of the stomach become seriously embarrassed. Construction of the stoma may take place with severe obstruction. I have operated on one case where the gastro-enterostomy opening had become reduced to less than 1 cm. in diameter.

Technical errors can lead to poor late results. The new stema may be unwisely placed or function poorly because of too long or too short anastometic loops in cases of resection or gastro-enterostomy. The stomach may even be connected to the ileum as I have once observed. A pyloroplasty may be faulty when completed.

Nationality and temperament apparently play a part in the late results of operative treatment. Recurrent ulceration is more fre-

quent in the Latin races. At least surgeons from these countries report the largest number of such recurrences, and a radical operation may be a wise choice for such cases, while a more even tempered person may be better treated with more conservative procedures.

Best results are obtained if surgery is considered as an adjunct to medical measures. A person who has been operated on for ulcer should not eat just anything he wishes but should observe a careful dietary regimen. Alcohol and tobacco must be sacrificed and foods known to be troublesome must be avoided. Indiscretions are quite likely to lead to disappointment.

The worst result of surgical treatment of gastric and duodenal ulcer is, of course, operative death. This can be greatly influenced by careful pre-operative measures. To put a man to bed one day and resect his stomach the next is not only poor judgment but criminal negligence. Every precaution adds to the safety of the operation.

Poor results will at times follow the most conscientious surgical care. McVicar has said there are surgical outlaws as well as social outlaws. Some individuals insist on having trouble. Many have been repeatedly operated on till they have little stomach and duodenum left, yet ulceration continues and the life of such a person is miserable indeed. We should realize, however, that such instances are fortunately rare, and while disappointment may follow surgery for this disease, yet the results in the large majority of cases are very good.

Great care should be given a stomach case. Scrupulous attention to details and painstaking effort can accomplish brilliant results. Complete asepsis, gentleness with tissue, perfect hemostasis, and avoidance of undue haste are fundamentals that favorably influence the results of gastric as well as all other surgery. Our failures should serve to make us more careful and as reminders of much that can be avoided.

REFERENCES

1. Moynihan, Sir Berkley: Diagnosis and Treatment of Chronic Gastric Ulcer—Essays on Surgical Subjects, P. 85; W. B. Saunders Co., 1921.
2. Idem: Abdominal Operation—4th Edition, Vol. 1, P. 314, W. B. Saunders Co., 1926.
3. Balfour, Donald C.: The Case Against Gastro-enterestomy—Collected papers of The Mayo Clinic and The Mayo Foundation, P. 63, Vol. xvl, 1924.

DISCUSSION ON PAPERS OF DR. PATTERSON AND DR. QUATTLEBAUM

Dr. L. W. Grove, Atlanta: These papers are very timely and Drs. Patterson and Quattlebaum are to be congratulated. They should be especially commended for emphasizing conservatism in the management of gastric and duodenal ulcer. We are all aware that within the last few years there has been a tendency toward extreme radicalism in gastric surgery. This has been especially true of certain clinics in Europe and a few of the Eastern clinics in this country. The pendulum is now beginning to swing back, and we are refusing to accept such radical attitude. Dr. Evarts Graham, of St. Louis, made a most helpful remark when he said in effect, "If we make further progress in gastric surgery, it will be through a thorough and careful investigation of the pathology we find at operations, and suitably dealing with it." To do a gastro-enterostomy on every patient with a gastric or duodenal ulcer, coming to operation, is to invite disaster. Upon the other hand, to have a preconceived idea of doing a sub-total gastrectomy in every case is likewise inviting poor results, plus a high mortality. There is undoubtedly a place for gastro-enterostomy, pyloroplasty and even partial gastrectomy, but only in the cases especially suited to these various procedures.

In perforated gastric or duodenal ulcer the time element is most important. If we can operate these patients early, most of them will get well; while if we are allowed to see them late, after peritonitis has been well established, the mortality will, of necessity, be high. I agree with Dr. Patterson in advocating a simple closure in most of these cases. It does not appear reasonable to operate these cases with a localized peritonitis and do an extensive operative procedure, any more than we would think of doing an extensive exploration in a case of ruptured appendicitis with peritonitis. When it is necessary to institute some plastic procedure in order to correct obstruction, some form of pyloroplasty is probably safer, when feasible. The probalility of soiling is less, and the peritonitis remains more localized.

In closing, I would like to emphasize four cardinal points in the management of inflammatory lesions of the stomach and duodenum. First, be sure that the pathology can actually be demonstrated. This point has been emphasized recently by Moynihan. He suggested the probability that a great many cases are being operated on, in whom there is no real pathology. He thinks this is also true of a certain percentage of cases receiving medical

treatment. He stated that he had had occasions to open a number of abdomens, in patients having had supposed medical cures, in which he was unable to demonstrate any evidence of a healed gastric or duodenal lesion. Second, we should make an effort to remove the ulcer in all cases, when feasible. This is especially indicated in gastric ulcer as it obviates the probability of future hemorrhage and also the possibility of a later malignancy. Third, when feasible, remove all associated pathology, such as chronic appendicitis, chronic cholecystitis, etc. Fourth, look carefully for foreign foci of infection, and thorouhgly eradicate them. We have under observation now a patient with classical symptoms of a gastric ulcer, who also has twelve periapical abscesses.

Dr. William H. Myers, Savannah: These two papers are on a subject that has probably been debated as much as any other in recent times. There are many things which are not yet settled, and there are probably more statistics about this subject than any other we have. Unfortunately, some of the statistics are not only erroneous, but are believed by the majority of men in the profession to be true, when as a matter of fact some of them are grossly in error. I believe that according to Babcock about 20 per cent of the ulcers which do not rupture are symptomatic, and about 20 per cent of those that do rupture are multiple, particularly of the gastric variety. You have seen many times the statement made that MacCarty of the Mayo clinic says that 68 per cent of gastric ulcers become cancers. Dr. Charles H. Mayo, in the 1926 volume of the Mayo Clinics, states that this is not true, and that MacCarty never said it. What he said was that in the Mayo clinic those ulcers one inch or more in diameter showed malignant changes somewhere. I have seen this quoted by many authorities but wish to bring to you attention that it is not true.

I wish to quote one thing that Coffey says, that statistics introduced into surgical papers are usually for the purpose of verifying the point the essayist wishes to make. and that is probably why the large number of data are gotten out on gastric and duodenal ulcers.

I think there is no condi·ion in surgery where judgment is so important as in the treatment of ulcer. In the perforated ulcer when the diagnosis is made within six to twenty-four hours operation is indicated. The nature of the ulcer is to be determined, and the skill of the operator will determine the result. Primarily the saving of the life of the patient is to be considered. I think a good rule is that if the patient is in good condition, and has a history of a large amount of trouble, a gastro-enterostomy is indicated. If there is a deformed stomach or some other constriction the procedure to follow would be to close the ulcer and do a gastro-enterostomy. If the patient is not in good condition and the ulcer is small and can be closed without constriction, and there are no indications for gastro-enterostomy or a more radical procedure, particularly if the surgeon is not sure of himself, I think a simple closure with drainage is the procedure of choice. In the cases in which the patient has suffered great loss of vitality and rupture has produced marked weakness, I think a man would be criminal to undertake a serious operation. Balfour reports that 90 per cent of these patients are cured by conservative surgery. In 10 per cent of the cases with complications, fair results are obtained in two-fifths. In other words, 94 per cent of the patients who were operated upon ten years later had good results.

Dr. C. W. Roberts, Atlanta: Measured by the yardstick of the Yale professor, that only a few souls are converted after fifteen or twenty minutes, we should have had several conversions this morning. The essayists are to be congratulated on the brevity and conciseness of their presentations. I think we should learn a lesson from a slogan recently introduced into salesmanship; namely, that a patient is not cured until she is not only operated upon but satisfied with the operative result. One of the beautiful things to me in our surgical work in Georgia is that patients are being kept longer under the care of the operating physician. There was a time when the doctors were under the necessity of sending their patients far away in order to have them receive proper surgical care. That condition is past, and we hope it will soon be possible for every community to have a proper hospital where patients can receive care and remain under the observation and attention of the surgeon and the family physician, so that they can carry them through and see the final results.

Dr. Patterson is to be congratulated. To get eleven patients out of twelve well is a remarkable record. This can be put into the literature with the assurance that it will compare favorably with statistics from anywhere. It is a compliment to him also that he has helped raise the standards of practices in his community in order to get the patients early enough to secure such results.

I wish to congratulate Dr. Quattlebaum also on the point that stands out in his paper, that the treatment of the chronic ulcer is not a matter of operation, but studying the general condition of the patient, taking out all foci of infection, doing a conservative operation, and then following the patient through until the end result is obtained so that one can determine whether the operation has given relief.

This type of work is the type that will be endorsed by the medical profession of the state, and if we stick to the proper type of work the cooperation between the physician and the surgeon will be complete, and we will soon be able to put into the literature the reports of work which will receive the general commendation of the profession, which we wish it to have.

Dr. Thomas Harrold, Macon: Dr. Patterson certainly is to be congratulated on having eleven out of twelve cases satisfactorily operated upon for perforation of the stomach.

I think one point in the postoperative care of patients with stomach operations is to have the patient swallow a small duodenal tube, which is then strapped to the side of the paitent's face. In that way we can prevent distension of the stomach and spreading of the suture line. This is well known to all of us but I think is not used as frequently as it should be. It is also applicable to any operation where distension of the stomach becomes a predominating feature. It prevents the distension and keeps the strain off the suture line. I believe the more frequent use of this simple procedure will aid in reducing the postoperative mortality considerably.

Dr. George L. Echols, Milledgeville: I wish to take a minute to call attention to the deplorable side of the general question. That is the patients with surgical conditions about the alimentary tract who fall into the hands of a surgeon, are operated upon but continue to have "stomach trouble," backache, constipation and some pain about the old site, and perhaps are operated upon again. Somehow or other there seems to be a little leak. I do not say it is the fault of the surgeon or of the family physician, but we get these patients over at Milledgeville and I tell them I know the man who operated on them and am sure he did the best he could, but why this leak? Such patients become depressed, emaciated, feel that there is no chance for them, and develop neuroses. I wish I could talk heart-to-heart with some of you and see if we could determine where this depression and these neuroses come on following such conditions. Perhaps the thought Dr. Roberts brought out about the patients being operated upon by their family physician and surgeon and remaining in their hands would be helpful, for they could be encouraged and told to use their backbone and determination and not give up, and that would be of great assistance. If they could be helped over the depressed phase and told to carry out the advice of their physician I am sure they would do better. If they are encouraged to eat a more satisfactory diet they will feel better and work better, and their nutrition will be improved. If you can figure out what I mean take it home with you and think it over.

Dr. Leora G. Bowers, Dayton Clinic, Dayton, Ohio: I did not hear Dr. Patterson's paper but heard that of Dr. Quattlebaum. It was very timely and covered the field well. There are just two points that I will take up.

First, the diagnosis of acute perforated duodenal or gastric ulcer. The result depends upon early diagnosis. It is very hard to see how any doctor could mistake the history of an acute perforated ulcer and make a diagnosis of acute appendicitis. There are two cardinal symptoms to consider in diagnosis of a perforated ulcer; one is that the patient will assume a position in bed or in a chair when the leak occurs and will not move. Why? Because the acid chyme is spilled into the peritoneal cavity and causes extreme pain on any movement. Second, the abdominal wall is as hard as a board. I try to teach my internes these pictures.

As to the operative procedure, every patient must be treated individually. In our clinic in duodenal ulcers if we get the patients early, we open them, mop out the contents which have spilled, and if at all mobile and not too deep we always excise the ulcer. To cover over an ulcer with a thick inflammatory tissue is to invite leaks afterward and the ulcer has not been cured. We almost always do the Horsley excision. If the incision is carried far enough over on the stomach side in these ulcer cases there will be no danger of obstruction after closure of wound. This procedure can be done more rapidly than a posterior gastro-enterostomy. In addition the patient has been relieved of their pathology. In some cases we excise the ulcer by using the up and down incision, brought out by Judd. If you excise two-fifths of the sphincter muscle and make that type of a closure the patient will get a fine result and will have no spasm at the pyloris.

One other point, in the gastric ulcer consid-

eration, is be sure that you have an ulcer before you excise. We do not excise ulcers that we cannot see or feel. If there has been hemorrhage we open the stomach and look in. Put in your finger and put in a light, and see how frequently you will find ulcers on posterior wall which cannot be palpated extenally.

Another important thing that was brought out is the after-care of these ulcer cases; that is, the use of the duodenal tube in vomiting, proper feeding, etc. The patients should be told they will not be well for at least six months. Tell them, if they have an x-ray picture made and see a deformity, in case an excision has been done, that it is not a new ulcer. Tell them that every time the weather changes from hot to cold they may have pain during the first year. They should be instructed to eat only cooked food, because it is much easier for cooked starches to be digested. Not long ago I operated upon a patient who afterwards went to San Francisco before he had made a complete recovery. I happened to be in Seattle and they sent some x-ray films to me. His doctor thought the films showed a deformity and probably a new ulcer. I wrote him and made a diagram of his operation for his doctor. It was a Horsley incision and the patient wrote me not long ago that he had regained his weight and health and was getting along very well.

Dr. A. H. Hilsman, Albany: I wish to emphasize the value of the Horsley operation. A few years ago a colleague of mine started out to do 100 cases. He told me afterwards he had done about fifty and he quit, as the results were not satisfactory. Anatomically the procedure appealed to me and I began using it. I have performed about twenty operations and have had better results than from anything else I have used. It is simple and with the longitudinal incision with the transverse closure it certainly gives us a wide pylorus and the results are satisfactory.

Unfortunately, very often we do not see these patients as early as we should. I had a sad experience the day I left home. I was called to the hospital early in the morning to see a druggist who, the night before, had been seized with acute abdominal pain; board-like rigidity set in immediately and he required morphine for relief of pain. He was given castor oil, salts and two or three enemas and taken to the hospital the following morning. I saw him with very rapid thready pulse, and in a moribund condition. Before we could get blood matched for transfusion he was dead. There is no excuse for this in an enlightened community. I wish to impress upon you that you should try to get these patients to stay away from purgatives, get the doctors to stop advising them, and get these patients to the hospital as soon as possible.

Dr. J. C. Patterson, Cuthbert, (closing): I wish to thank the gentlemen for their discussion. Dr. Roberts spoke of the element of time. If they are seen early enough they should not die, unless the surgeon attempts to do too much. In the few cases I have had almost all of the patients were seen within twelve hours, except the one that went forty-eight hours. I believe the mortality is higher from the big centers because of the big reputation of the surgeons there and the fact that patients will travel many miles to see them, and if you analyze the reports you will find that most of the patients had resection, gastroenterostomy, or something besides mere closure. I have a friend who had a rupture, and a gastro-enterostomy and still has trouble. In an emergency I do nothing but what is necessary, and later on a proper operation can be carried out, when the patient is in better condition. As Dr. Quattlebaum brought out, we should have no set operation but do what judgment tells us is proper at the time.

Dr. Julian K. Quattlebaum, Savannah, (closing): The stomach is the great abdominal sympathizer and is reflexly disturbed both by injury and emotion. Most of the gastric symptoms are functional and for practical purposes there are only two diseases of the stomach, ulcer and cancer. It is possible to remove a normal appendix or gall bladder without disturbing the body economy, but if we do any operation on a normal stomach that is only being reflexly disturbed, that patient is almost surely to be made worse. Dr. Frank Lahey has said that any ulcer that could be removed by means of a pyloroplasty could be cured medically but he only takes cases for medical treatment who will remain in the hospital indefinitely. This is probably true but few patients can afford the indefinite hospitalization necessary to effect a cure. The ulcer that cannot be cured medically is the one that is adherent and held open by adhesions to some neighboring viscera, the pancreas or gall bladder.

In a discussion of this kind I always like to say a kind word for gastro-enterostomy, an operation which carries only 2 per cent risk and in properly selected cases cures nine times out of ten. If we only had one operative procedure for peptic ulcer, that operation would be posterior gastro-enterostomy.

SOME GYNECOLOGICAL PROBLEMS*

MARION T. BENSON, M.D.,
Atlanta

Any gynecological procedure, however brilliant, if it fails to relieve or cure, brings from the laymen a bitter condemnation of surgery and its frequency in failing to cure or benefit the patient develops surgical agnostics, not only among the laymen but our best men in medicine and surgery. Realizing that there is entirely too much surgery being done of a gynecological nature and realizing from personal experience that 50 per cent of these women, particularly during child-bearing period, could be relieved with less drastic measures is the purpose of this paper.

According to R. H. McKay, "If 60 per cent of surgery is gynecological, 80 per cent of surgical dissatisfaction is gynecological."

Through the courtesy of the American College of Surgeons, Research Bureau, I have had the opportunity of reviewing the literature and the present thoughts of a good many authors and I will quote from time to time their opinions.

Before advising a gynecological operation we should study the patient first as a whole, then from a gynecological standpoint, make a complete physical examination, including in this the nervous make-up and her environments. This examination should include a complete laboratory examination of blood, urine, together with a cystoscopic and x-ray examination if there is anything suggestive; in other words make a complete clear-cut diagnosis before advising an operation. If we take the record of any hospital, either private or general, it is appalling to see the number of unnecessary operations where, if there had been a complete study, the patient could have been relieved without surgery or they would probably have been operated upon for some other condition.

If tubes and ovaries were located as are the vas deferens and testicles, there would not be half so many removed. As the male realizes the vast importance of these organs to his health and happiness he will not consent to their removal until he has consulted one or more surgeons, while the female is led to the slaughter.

Anyone doing a gynecological practice, whether it be large or small, sees these nervous wrecks as well as our medical colleagues. I am not excepting myself as all who are doing gynecology have been guilty of giving the wrong advice and doing things which would have been better left undone; we have operated without making a careful enough diagnosis, especially in the potential nephritic women. These women stand any surgical procedure very poorly and often on or about the second, third or fourth day, there is a mortality.

Since the advent of diathermy, which I have been using very successfully in treating many gynecological conditions, I have advised fewer operations and have received better results with less trauma and no adhesions, less mortality and morbidity, than I would have had if I had operated.

In regard to operating without careful diagnosis, Douglas has the following to say: "I feel that many tubes, ovaries and possibly uteri are being removed when, if we would only take time to make a diagnosis, we would find a cystitis or some other pathology of the urinary tract which could be cleared up by cystoscopic treatment, bladder irrigation, etc., and our patient would become well and happy. By operating before making a correct diagnosis, the patient is probably not only not benefited, but has been done an unpardonable injustice by the surgeon operating, the operation likely having been adopted because it was seemingly more spectacular."

The following is from Polak: "At the present time, when each community has its own hospital and the surgical fever has seized the profession, and gynecology in many communities has passed into the hands of the general surgeon, who not infrequently offers operation as a panacea for almost all of the disorders peculiar to woman, it would ascertain the effect that some of these more popular gynecological procedures have on the future child-bearing of woman.

*Read before the Medical Association of Georgia, Macon, May 9, 1929.

Over 60 per cent of gynecological lesions, viz., the injuries of child-birth, decensus. and acquired displacements, are the direct results of poor obstetric practice—the remaining 40 per cent include endocrinal disfunctions, anomalies, infections and tumors. Hence, it will be seen that in considering operation for the relief of gynecological symptoms, one should not only be familiar with the etiology and pathology of pelvic disease, but with the accepted methods of cure for the large proportion of cases that belong to our obstetric omissions."

From Bacon Saunders, in a paper entitled, "Are Some of the Methods Commonly Practiced in Gynecology Conservative or Destructive in Results?," I take the following quotation: "The slogan of the hour is conservation and reconstruction. This must appeal most directly to the gynecologist, since his business in life is to conserve when possible and reconstruct when necessary. Since the purpose of all gynecological undertakings avowedly is and certainly should be the betterment of the individual condition to the greatest possible extent the science and art afford, it behooves those who practice it to be constantly on guard not to be led astray by the ignis fatuus of cult or the prevalence of custom.

"Those who do not constantly and seriously review the results of their own work as well as that of others with which they come in contact, from every point of view, physical, mental, social and economic, are not in a position to either advise or execute the best that might be done. Equally inefficient, and what is more important because of the potentiality of harm, are those who fall into the habit of subjecting their patients to various operations and manipulations for no specific, well worked-out pathological conditions but on what for the want of a better term may be called, "General Principles."

"In those other days when the practice of gynecology consisted almost wholly of "local treatments," rule of thumb methods did little harm if they did no good. But not so now when every doctor who can muster up a speculum, a curette and a sound considers himself a thoroughly equipped gynecologist. As a logical result of this state of mind, more or less general among the profession, the increasing number of operations for all kinds of ailments, both real and imaginary, done under all kinds of circumstances by all kinds of doctors, and many times without either rhyme, reason or surgical technique, is truly appalling. Under such circumstances it is impossible that all such undertakings could be well advised, carefully planned and skillfully executed, with the patient's best interest solely in mind.

"With such a condition plainly discernible all about him, on every hand, one sometimes finds himself almost forced to contemplate what the effect on the average practitioner's income would be if he recommended only such of his clientele for operative treatment as really needed it after careful, intelligent and conscientious investigation. Let it be understood that in making this statement it is not intended to impugn any man's motive but rather to drive home the thought that when doctors advise surgical procedure for all the ills that womankind is heir to, somebody is going to do a good many things that would infinitely better be left undone.

"It is not thought, much less is it intended to suggest, that such surgical procedures are undertaken with any but the best of intentions in an overwhelming majority of instances. But good intentions on the part of the doctor do not by all means always accomplish the best results for the patient. Every proper gynecological procedure must be predicated on three essential things (1) a thorough knowledge of the subject, diagnostic, therapeutic and prognostic; (2) a well trained, experienced and wise surgical judgment, and last but by no means least (3) a well developed and accurately poised surgical conscience. This is the trinity of qualifications that must constitute the warp and woof of every doctor who essays to practice gynecology acceptably under present standards.

"If he is lacking in either of these attributes, his undertaking to manipulate the complex organs of the female pelvis may be compared very appropriately to the classical "bull in a china shop." There is no place in the realm

of medicine where more scientific knowledge, a better understanding of the whims and foibles of human nature and withal, greater art and skill are required than in diseases of women. There is no other field of surgery where the opportunities and temptations for the exploits of the operator who is not a surgeon are so many as in gynecology. I trust I may be pardoned for making the further statement that the domain of surgery does not afford any other field in which there is so much immature, ill-advised, unnecessary and often harmful, operating and manipulation done.

"This is due in a large measure to a number of things, principal of which is the fact that nearly all women, sooner or later, think their genital organs need some kind of patching up or cutting out. At the same time they have unbounded confidence in their doctor, albeit his chief qualifications may be that he is their doctor. This confidence should make his responsibility doubly great and his position a very serious and sacred one.

"Men as a rule, do not so readily and confidently submit to surgical procedure and consequently have fewer and better advised and executed surgical operations than women. It is also a fact that a man, instead of being in constant apprehension that some of his genital organs will have to be removed, invariably has to be shown and generally three or four times, too, before he will submit to have it done. None such for him unless driven to it by dire necessity.

"There are two classes of physicians that are a distinct menace to any community. The one who assigns all the ailments of his female patients to "ovarian trouble" and the one who every time he gets in an abdomen or pelvis for any reason whatsoever, takes all the ovaries in sight. The first, unwittingly it may be, but very effectually nevertheless, drives them into the capacious maw of the second. Contemplate, if you will, what chance the luckless patient has to escape with anything left in her pelvis except the bladder and rectum if both of these individuals, as is not rarely the case, happen to be combined in one."

Oftentimes you read an article of a number of hysterectomies that a certain man has performed, which go into the hundreds. I have often wondered how much better womankind would have been if these same men had been more conservative and used their energies in conserving this organ which is so vital, especially during child-bearing period. I once saw an enthusiastic young surgeon have on display a small normal uterus which he had removed in a woman 22 years of age on account of a small polypus extending from the cervix, no other pathology being present.

In regard to unnecessary hysterectomy we have the following from Miller: "Just as cesarean section has become the most abused operation in obstetrics, so has hysterectomy become the most abused operation in gynecology, and for exactly the same reason, its ease of performance and its brilliant end-results—provided all goes well. Naturally it is definitely indicated under certain circumstances, but it is not a cure-all for every type of pelvic disease, and it is no more logical to perform it routinely for pelvic pathology than it would be to amputate the hand for a broken bone. Hysterectomy for uterine bleeding, for instance, is seldom warranted today unless actual uterine pathology is present. In the first place, such bleeding is as often due to extrauterine as to intrauterine conditions. Constitutional diseases, adnexal pathology, general debility and lowered resistance, and endocrine dysfunction all, in the light of modern knowledge, play an important part in the production of uterine hemorrhage, and it is well to be certain that none of these is responsible, before the uterus, which is often merely responding to the evil stimulus of disease elsewhere, is removed. Likewise one cannot be too careful to eliminate pregnancy as a possible source. Few things are more humiliating than to perform a hysterectomy and to find an unsuspected early pregnancy, or a threatened or incomplete abortion. In studying a large series of cases it is surprising to note how often this happens, and how often the uterus is entirely negative or exhibits merely a fibrosis or hyperplasis."

In an article by H. T. Hutchins: "Opinions will undoubtedly vary on the effect of

removal of the uterus previous to the menopause. Some claim that the uterus has a distinct hormone or internal secretion which is of certain benefit to the general organism. That this hormone is secreted most during menstruation and the loss of this function by the removal of the organ is somewhat detrimental. This, however, is at the present time far from proven. Thousands of uteri have been removed at all ages and for all causes but no definite bad results appear from the loss of menstruation provided ovarian tissue can be conserved.

"There is one point I want to speak of in which radical surgery of the uterus is being performed many times, and that is in patients with persistent bleeding due to hyperplastic hypertrophic or polypoid endometritis. They resist curettage and curettage may be performed many times, and then perhaps the uterus removed. These cases are much better and more satisfactorily treated with radium in the cavity of the uterus." My experience is that we should determine as near as possible the source of the bleeding before advising any treatment.

In regard to retroversion or displacement, the big "bugbear" of many doctors as well as many patients, and many damage suits have come from this condition which the great majority of womankind is heir to. If a woman has a slight or severe fall while she is on a common carrier and there is an accident, the first thing is a misplaced uterus and a damage suit, while in all probability she has had this misplacement or retroversion for a good many years.

Quoting again from Miller in regard to displacement, we have the following: "It is well to remember, that because backache is associated with retroversion, it does not necessarily follow that it is due to it. Arthritis, neuritis, kidney disease , sacroiliac strain, traumatism, even bad posture, may all be responsible, and it is wise to eliminate them before the patient is promised relief by surgery. Likewise retroversions play only a minor part in sterility, and suspension operations performed solely for the relief of this condition are not usually justified by their results."

Polak says: "A review of our cases, show that more unnecessary operations have been done for the relief of backache, than for any one symptom, except that of sterility. To those of us who have studied this subject, it is well known that retroversion per se, does not prevent pregnancy; and but a very small percentage of the backache in woman can be traced to retro-deviation; yet there are some ninety-three different operations which have been devised and done for the correction of backward displacement of the uterus, each having its sequelae and often times its effect on the future child-bearing of the particular woman.

"To the popular mind, and back in the brain of many physicians, displacement of the uterus is the cause of sterility, and likewise the cause of backache in woman. A study of backache reveals that not more than 18 per cent of all the backaches are due to gynecological conditions, and the most common among these is infection of the posterior parametrial tissues, an extension from the infected cervix—therefore, before operation is suggested, a careful study of the back, the sacroiliac joints, skeletal defects, faulty posture and flat-foot should be made; otherwise the woman is subjected to a needless operation for a condition that is found in over one-fifth of all gynecological patients."

In regard to cervicitis and leucorrhea, the popular treatment is that all cases of leucorrhea and cervicitis are fit subjects for the curette. The curette has done more damage to womankind than any other instrument that can be named; in Polak's article he has the following to say regarding the curette: "In our clinic, the curette has but two purposes; that of removing the secundines from the uretus in the aseptic incomplete abortion before the eighth week; and for diagnosis to determine the cause of bleeding in uterine hemorrhage. Never has the curette cured a leucorrhoea; never is such a result possible. Leucorrhoea is a symptom of cervical disease; the discharge seldom, if ever, comes from the endometrium of the uterus; and it can only be cured by the destruction or removal of the infected areas; the curette cannot do this."

It is self evident that curettement has stirred up many an old gonoccoccal foci, and in turn often sets up pyosalpinx and often general peritonitis. The cervix has been the most abused of the reproductive organs, whereas it should have been handled with the most respect. In regard to cervicitis and leucorrhoea Blair says: "It is hoped that, in general, a little more consideration and respect may be accorded an organ whose treatment, taken the continent over, borders on abuse. After all, the cervix is in a remarkably strategic position. It is the gateway to the citadel, the barrier between the aseptic and the ever septic, the dividing line between things mundane and the great unknown. It accepts or rejects morbid bacteria or the vital sperm seemingly at will. We try our best to dictate to it, but after all with little avail. Without its protection the uterus and ovary lose all their romance and much of their use. Their major function, creation, is lost."

Many a small laceration of the cervix should not be operated upon but with careful cauterization, either with a diathermic spark or with small actual cautery. If care is taken in cauterizing this cervix, nature will then infiltrate and produce a smooth surface which in my opinion is much preferred to submitting the patient to operation. I have found my best results in treating leucorrhoea and cervicitis and small tears with diathermic treatment.

Many a woman has been made sterile following an abortion through some form of infection. We must remember that any inflammatory process or traumatism of the cervical canal can render a woman sterile. We have had a number of women make the following statement: "Soon after marrying I became pregnant and had an abortion produced." They give a definite history of inflammatory nature, saying they were not able to become pregnant again afterwards. The sad part of this is that these women later in their married life desire to become pregnant and then are not able to do so.

Quoting further from Polak in regard to sterility: "In sterility, there are always two parties to the contract; each does his or her part. Routine examination of the male shows that from 25 per cent to 30 per cent are either permanently or transiently impotent; while on the woman's side, we find endocrinal disturbances that directly inhibit conception in nearly 50 per cent of the patients applying for relief. This large class includes general hypoplasia with or without marked malformation, ovarian disfunction, due to pituitary over-activity hypothyroidism, and those ovarian inefficiencies which result from infection or chronic circulatory disturbances. Next most important, are those following induced abortion. Hence, it will be seen that before proposing operation for the cure of this condition in any woman, a most painstaking examination including an investigation of both parties must be made; yet, notwithstanding this fact, which seems so self-evident, the uterus is being curetted, stems are being introduced, discission of the cervix is being done, and excision of the cervical glands advocated without having made this investigation.

Immediate repair of the cervix is ideal obstetric practice, but is too dangerous to the woman to permit of its general adoption. The longer one practices obstetrics, the fewer immediate repairs are done on the cervix. For it is not so much the injury, as the incidence of infection that changes the cervical tissues: the uninfected lacerations close spontaneously leaving but a nick in the cervical rim. Trachelorrhaphy is applicable in unilateral or bilateral tears without hypertrophy, hyperplasia or infection.

In this brief review of some of the common procedures, certain points stand out:

First: That too many women are operated upon—many needlessly.

Second: That sterility operations give poor results and often have unfortunate sequelae.

Third: That the gynecological patient seldom has a complete diagnosis before operation is advised.

Fourth: That when possible, operations in the child-bearing woman should be deferred until she is finished having children; that in the interim better obstetrics, more attention to post-partum care, and the judicious

use of pessaries will keep these women comfortable.

Fifth: That every abdominal operation has its morbidity and is followed by some intrapelvic pathology and a small mortality.

Sixth: That greater care as to indications should be used before determining on caesarean section, and;

Finally: That the gynecologist or surgeon should have an obstetrical training before doing surgical operations on the child-bearing woman."

There is one other thing I would like to call to your attention; that no woman should be operated upon following her first gonorrhoeal infection. In the acute condition, if it goes into the febrile stage these cases respond very readily to rest in bed, ice cap and daily injections of aolen, followed by diathermic treatment. It will be surprising to see how the parts that have been acutely inflamed will subside and yield to this treatment.

I would like to give briefly three cases that well illustrate what I have been trying to convey in this paper.

Case No. 1. Mrs. T., age 18, married two months, came complaining of pain in the right lower quadrant, severe in nature; backache; dismenorrhea. She was in a highly nervous condition, as she had been advised the previous day to go to the hospital for an immediate acute appendectomy. Upon careful physical examination, no rigidity was marked over McBurney's point, but there was considerable tenderness over the whole lower right quadrant. After further thorough study, the patient was advised postponing immediate operation. Cystoscopic examination was made with the following diagnosis: Stricture of right ureter, just below pelvis with dilatation of upper ureter, slight hydronephrosis. Ureteral calculus left low with complete blocking of ureter.

Within twenty-four hours after cystoscopic examination the calculus was passed. Dismenorrhea was treated with diathermy vaginal electrode and after thirty days' treatment, menstruation was without pain.

Case No. 2. Mrs. A, age 30, chief complaint: Bleeding from the uterus. She gave a history of bleeding off and on during the past year; some three months previous she had had a D and C under ether. Following this she continued to bleed.

Upon making pelvic examination, a wide mouth bivalve speculum was used so as to expose the cervix thoroughly. The cervix was acutely inflamed with numerous small cyst formations surrounding the whole cervical structure, which upon slight pressure would bleed. There was a general oozing from around the cervix. The uterus was normal in size; firm; appendages negative. Diagnosis: Acute cervicitis with cystic formation. This whole surface was gently cauterized with a diathermy cervical electrode holding the electrode one to two centimeters from the surface, thereby securing an electric spark which completely cauterized the surrounding tissue; as these small cysts were punctured there was a small amount of fluid discharge. In the course of time the cervix healed smoothly with no return of the bleeding.

Case No. 3: Mrs. D., age 40, came for examination, complaining of ulcer on the cervix, stating that it had been treated for a year without healing. Two sections had been made for microscopic study which were diagnosed non-malignant. Radium had been advised, also hysterectomy and amputation of the cervix. This ulcer was thoroughly cauterized and then subjected to diathermy vaginal electrode three times a week, except during the menstrual period. In the course of two months the cervix was completely healed and the patient has had no return of symptoms for the past year.

In conclusion, each of us who are doing gynecology should remember that "snap diagnosis" has no place whatsoever in gynecology. Aside from the acute conditions, such as ectopic pregnancy, rupture of the uterus, acute appendicitis, intestinal obstruction, twisted ovarian cyst, there is plenty of time to have the proper laboratory findings made and, if in doubt, consultation with our medical colleagues. Many times these will determine the indications or contra-indications for surgery.

The average man who is doing gynecology seems loathe to confer with his medical colleagues. There should be more team work between the medical men, the surgeon and the laboratory. It is only after patients return after some surgical operation, such as shortening of the round ligaments, repair of cervical injuries, or appendectomy, with her digestive symptoms uncured, her backache unrelieved, or dismenorrhea unimproved, that the internist and the laboratory are called into aid. Then the patient and surgeon realize that an unnecessary ineffectual operation

has been done because sufficient time was not given to the pre-operative study of the particular case.

REFERENCES

McKay, R. H.: Avoidable sequellae of gynecological surgery. Ohio State M. J., Columbus, 1926, xxii, 401-402.
Douglas, G. F.: Gynecological surgery; radical or conservative. Virginia M. Month., Richmond, 1926, lii, 731-734.
Polak, J. O.: Effect of popular gynecological procedures on the future of child-bearing of women. Canada Medical Association J. Toronto, 1924, xiv, 797-803.
Polak, J. O.: Needless operations, Am. J. Obst., N. Y. 1919, lxxix, 465-474. (Discussion) 567-575.
Saunders, B.: Are some of the methods commonly practiced in gynecology conservative or destructive in results? Texas State J. M., Fort Worth, 1919-20, xv, 391-292-393.
Miller, C. J.: Consideration of certain gynecologic procedures from standpoint of conservatism. Am. J. Surg., N. Y., 1927, iii, 428, 432.
Blair, E. M.: Conservative treatment for chronic endocervitis. Canad. M. Assn. J., Toronto, 1927, xvii, 1480-1483.
Hutchins, H. T.: Radical pelvic surgery., Tr. New England S. Soc., Boston, 1928, x, 224-234.
Isbister, J. L. T.: Some contraindications for hysterectomy. Med. J. Australia, Sydney, 1927, ii, 645-648.
Benthin: Value of conservative treatment of gynecology., Med. Klin, Berl. & Wien, 1926, xxii, 401-404.
McGrath, John F.: Surg. Gynec. Obst. Feb., 1926, 241-244.
Morrison, R. H.: Med. J. Australia, Sydney, 1925, ii, 225-226.
Pool & Hawks: Surg. Gynec. Obstet., Dec., 1925, 825-833.
Smith, Morris K.: Am. Journal of Surgery, vol. iii, No. 3, P. 255-258.

DISCUSSION ON PAPER OF DR. BENSON

Dr. W. L. Cooke, Columbus: I wish to thank Dr. Benson for the conservatism of his paper. All of us, myself included, who do any surgery have been guilty of operating too often, of operating upon patients where operation was really unnecessary. If we had taken a complete and thorough history and made a careful examination and gone into the condition as thoroughly as the case demanded, we would not have operated or would have used a different method than we did.

There is one point Dr. Benson touched on rather lightly that I wish to emphasize, and that is stricture of the ureter as a cause of gynecological symptoms. It is surprising how many patients will come in complaining that their ovaries are giving them trouble, when the history and physical examination will rule out the ovary entirely. Very often in those cases cystoscopic examination and a pyelogram will reveal stricture of the ureter. Many patients have had the ovaries removed, the appendix removed, a nephropexy done, or the gall-bladder removed, when the real pathology was in the ureter. I have operated on many of them myself and found later that I had stricture of the ureter to deal with. The usual history these patients will give, if they do not happen to fall into the hands of a man who does some of this work to start with, is that Dr. So-and-So two or three years ago removed my left ovary, and Dr. So-and-So operated for appendicitis. It is "chronic appendicitis" that gets the credit for many of these cases when it is the ureter that is involved. In nearly all cases of stricture of the right ureter the appendix will be blamed. I wish to make a plea for thorough examination in these cases, and then there will not be so many useless, unnecessary and harmful operations performed.

Dr. C. H. Richardson, Jr., Macon: I think Dr. Benson's paper might well have been entitled "Conservatism in Gynecology."

First, I wish to stress the point that uterine displacements cause few symptoms. I think if the average woman did not know that she had a uterine displacement she would be no worse for it. This does not include the cases connected with uterine discensus.

I think there is only slight ovarian pain with cystic ovary. The only conditions that are likely to cause pain are the cysts with twisted pedicle, or the very large cyst where tension causes pain.

I think practically all of us are agreed that curettage is a diagnostic procedure. It will not cure dysmenorrhea or anything else. It is of no value except to remove the remnants that may be left after incomplete abortion, or as a diagnostic procedure in the treatment of uterine carcinoma. Dysmenorrhea is largely a constitutional problem, and we cannot cure it by local applications or dilatation of the neck of the uterus. It is usually made worse by operative procedures.

Backache has very little foundation in gynecology. It practically never is caused by uterine displacements, and is much more likely to come from some trouble in the urinary tract or the vertebral column.

Endocervicitis frequently is a factor, acts as a focus of infection, and is the greatest forerunner of carcinoma of the cervix that we have.

Dr. William H. Myers, Savannah: I wish to emphasize one or two points. In regard to curettage, I agree with Dr. Richardson that it would probably be better if manufacturers quit making curettes, for so far as we can tell about 10 per cent of the cases of sterility are attributable to the curette. Not only that, but in the virgin it is very likely that no infection will get to the cavity of the uterus unless it is mechanically carried there. In the woman who has borne children there is likelihood of serious infection being caused by the curette.

As to backache being due to retroversion or displacement of the uterus, I think that is an error. I think it does not actually occur for we see time and time again women with complete prolapse without any backache whatever. I believe an endocervicitis with inflammation and infection of its utero-sacral ligament is the most frequent cause of backache.

MESENTERIC CYSTS WITH INTESTINAL OBSTRUCTION*†

RALPH H. CHANEY, M.D.,
Augusta

The development of mesenteric cysts both in respect to the frequency of occurrence and etiological origin has long remained an unsolved problem. Thus, even in the presence of many discussions, it does not seem irrelevant to report a single case, unique in that it produced complete intestinal obstruction, a complication which I am unable to find previously reported.

In reviewing the literature it appears that with the single exception of the case reported by Coley[1] in 1910, the correct diagnosis has not been made preoperatively. In fact, Miller[2] reviewing the subject as late as 1913 makes the statement that "a positive diagnosis has probably never been made."

While mesenteric cysts were first described in 1507 by Benevienni, our present understanding of them dates from 1897 when Moynihan[3] published his monograph. Moynihan classified mesenteric cysts according to their dominant gross characteristics as serous, chylous, hydatid, blood, dermoid, and cystic malignancies. He made no attempt to indicate their origin save to call attention to Richel's view that blood and serous cysts were resultant from hemorrhage taking place between the layers of the mesentery, the others probably arising due to dilation of the lacteals or the lymphatics, or due to degeneration of lymph glands.

Further stimulation in the study of these cysts came following Dowd's paper of 1900, in which he advanced the theory that the majority of these cysts arose from sequestration of small embryonal elements in locations foreign to their normal development, where later due to some stimulus they take on abnormal growth. This idea was deduced due to finding an intermesenteric tumor histologically resembling a cystadenoma of the ovary. Dowd[4] showed that in the development of the Wolffian duct that sequestration can readily take place between the folds of the mesentery. Further evidence of the existence of sequestration occurs in following the development of the thyroid, the thymus and the adrenal, as has been shown in the work of Ziegler[6]. If sequestration does arise from developing germinal structure, it does not seem impossible to conclude by analogy from our knowledge of the way that various adult structures are developed into very dissimilar organs from the same primitive source, that any type of cyst may grow from such sequestration areas.

The most recent light concerning the development of mesenteric cysts comes from the work of Lewis and Thyng[7], who have shown that in the early embryos of pig, rabbit and man diverticula are of common occurrence especially along the small bowel, where they frequently become completely detached or remain attached only by a simple cord-like stalk or pedicle. It is their belief that the separation of these diverticula, followed by their subsequent degeneration is the history of mesenteric cyst development. This view is further supported by their frequently finding small epithelial lined cysts outside the duodenum.

The correctness of Lewis and Thyng's theory of development is supported by the fact that Keith[8] in 1910 while studying diverticula of the intestinal tract found two cases in which the diverticula have developed into cysts without any connection with the bowel remaining. Again in 1913 Miller[2] reported a case in which the inner lining of the cyst wall absolutely corresponded with the epithelium of the adjacent bowel though no connection between the two structures could be demonstrated. Hunter[9] in 1922 reported another case in which the wall of the cyst contained all the normal layers of the bowel wall, though not connected with its lumen, though he does not mention the character of the inner lining of the cyst.

While some 200 cases of mesenteric cyst have been reported, Porter[10] states that the average age when they are manifest is about the fifteenth year. Valenti[11] reviewing the subject in 1921 was able to find only 21

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1929.

†From the Department of Surgery, University of Georgia Medical Department and the Division of Surgery of the University Hospital, Augusta, Ga.

cases under seven years of age, prior to which Niosi[12] in 1909 reported only five cases to have occurred under one year. Hunter[9] in 1922 added one case occurring at seven weeks of age.

In the majority of instances mesenteric cysts in infants have been diagnosed as intussusception with or without associated volvulus, the latter condition being commonly associated with cysts. The recognition of the frequency of this association with volvulus is credited to von Blun by Jones[13]. Most cysts show no characteristic lining, Hahn[14] stating that they usually contain no epithelium, even though we should expect its existence if the most probable source of their origin is considered.

H. U., (U. H. 30568), age four weeks, was admitted to the University Hospital on June 15, 1923, the major symptoms being vomiting, straining at stool, and blood admixed with mucus in the bowel movement. The history was that twenty-four hours prior to admission the infant began to vomit, which rapidly became very frequent and forcible. This was associated with frequent stools which were accompanied by marked straining. At first no blood was present but shortly after the onset blood and mucus became abundant in each stool.

The infant was full term, normally delivered, healthy at birth, breast fed until admission and except for an attack of vomiting lasting two days, when two weeks old, his development had been normal.

On admission the infant was toxic and dehydrated, the abdomen being distended and in the right mid abdomen a firm palpable mass was present adjacent to which visible peristalsis existed. The red cells were 4.9 millions and the leukocytes 14,950. A diagnosis of intussusception was made and for twenty-four hours attempts were made to reduce the invagination by enemata of sweet oil. Twenty hours after admission I was asked to see the infant and in spite of evident increasing dehydration, failing heart muscle and persistent fecal regurgitation I advised exploration as the only means of saving life. The abdomen was full, relaxed and a tumor mass, slightly movable toward left, the size of a large hen's egg could be felt.

Under 0.25 per cent procain infiltration anesthesia, through a right rectus incision a large cyst was found growing between the leaves of the mesentery to the second or third jejunal loop. The growth of the tumor had completely flattened the bowel so as to produce absolute obstruction, the bowel above the tumor being distended and that below entirely collapsed. The avascular leaf of mesentery was incised and the tumor was easily enucleated as it had no apparent connection with the bowel. On removal of tumor the upper loops promptly emptied and the flattened segment as well as the lower bowel filled normally. The rent in the mesentery was sutured with fine catgut and the abdominal wall was closed in layers. The entire operation lasted twenty minutes.

Following operation the infant retained fluids and seemed to improve for eight to ten hours when urinary suppression occurred, vomiting increased and death occurred eighteen hours postoperatively.

The pathological study showed an oval cyst approximately 7x10 cm. in size which on section was filled with a semi-translucent jelly-like material, which proved to be pure mucin. The wall of the cyst was composed of two layers of muscle which were identical with the musculature of the bowel adjacent to the tumor. The lining of the cyst was composed of one or two layers of flattened epithelial cells which had little or no resemblance to intestinal epithelium.

This case apparently falls into the group of cysts reported by Keith where diverticula develop into cysts without connection with the lumen of the bowel, even though it was impossible to prove the lining of the cyst in this instance to be intestinal epithelium. The orderly arrangement of muscle wall certainly suggests such grouping.

In conclusion, the case presented is unique in that a mesenteric cyst developed which produced complete obstruction before symptoms arose, in that it demonstrates the ease with which these tumors may be removed, and finally in that it strongly supports Lewis and Thyng's theory of mesenteric cyst development.

BIBLIOGRAPHY

1. Coley: Ann. Surg. 51:512, 1910.
2. Miller: Bull. Johns Hopkins Hosp. 24:316, 1913.
3. Moynihan: Ann. Surg. 26:1, 1897.
4. Dowd: Ann. Surg. 32:515, 1900.
5. Dowd: Ann. Surg. 61:481, 1915.
6. Zeigler: Lehrbuch der speciellen, Path. Anat. 7ed Jang.
7. Lewis and Thyng: Am. Jour. Anat. 7:505, 1907-08.
8. Keith: Brit. Med. Jour. 1:376, 1910.
9. Hunter: Brit. Med. Jour. 2:800, 1922.
10. Porter: Ann. Surg. 43:380, 1906.
11. Valenti: Pediatria, (Naples), 29:131, 1921.
12. Niosi: Virchows Archiv. 190:217.
13. Jones: Surg. Gyn. and Obs. 21:56, 1915.
14. Hahn: Quoted by Friend—Surg. Gyn and Obs. 15:1, 1912.
15. Bay and Wilkerson: Am. Jour. Surg. 27:309, 1923.

DISCUSSION ON PAPER OF DR. CHANEY

Dr. A. H. Hilsman, Albany: When I was asked to discuss this paper I felt that it would be a very easy matter, for if there is anything in surgery that I know little about it is mesenteric cysts. In thirty years of surgery I have seen only one, and this case I did not report at the time, for I did not realize the condition was so rare.

A white man, 37 years of age, was brought to the hospital seven years ago with an acute abdominal condition. There was pain nausea, and slight rigidity of all abdominal muscles. The pain was localized chiefly around the umbilicus; no mass could be felt. The red cell count was 4,500,000; the white, 9,000; polymorphonuclears 80 per cent.

A tentative diagnosis of acute appendicitis was made. The abdomen was opened through a right rectus incision, and the appendix found rather swollen and congested with a few adhesions. Feeling that this did not account for all the patient's symptoms, I enlarged the incision and made a further search, finally coming to a mass in the second portion of the jejunum. To palpation it felt like a malignancy of the small bowel, but upon more careful inspection, I found the mass lay without the gut, although the intestine contiguous to the mass was entirely flattened out from pressure. The mass was about the size of a hen's egg and intimately adherent to the root of the mesentery. Its removal was not altogether easy, owing to the marked vascularity, as well as to inflammatory adhesions, but I succeeded in enucleating the mass and after closing the incision in the fold of the mesentery, the abdomen was closed. The patient made an uneventful recovery and was discharged on the twelfth day.

The fluid in the cyst was clear and apparently sterile. The walls of the cyst were lined with a mucous membrane showing the characteristics of intestinal mucous membrane.

After reviewing the literature of these cysts, I think Dr. Chaney and I are both to be congratulated upon the facility with which ours came out. Owing to the extreme vascularity of their walls and the proximity of their poles to the vena cava and ureter, removal is difficult. Again, I think we were particularly fortunate in that the planes of cleavage between the walls of the cyst and the peripheral vessels had not been obliterated by inflammatory adhesions.

I have been able to find only about 300 cases reported, with a mortality rate of from 25 to 40 per cent. I found only one other case associated with obstruction. Erdmann reports only three cases out of from 700 to 900 laparotomies a year, and none with obstruction.

If I am not out of order, I would like very much to continue my discussion of the second phase of this paper, the complication of obstruction. I noticed in looking over the program that this most important subject has not been touched upon. Our mortality in these cases is high. I feel that in recent work of Haden, Orr, Ayers, Gatch, Trusler and others on the chemistry of intestinal obstruction, has been thrown a new light upon the subject and already my mortality is beginning to fall from near the 100 per cent mark. It was only through constant advocation of early operation and omission of purgation that we succeeded in reducing our mortality in acute appendicitis, so I trust it will be in acute obstruction.

In considering this question we should have in mind that the obstruction implies, not only that of the fecal current but the blood and nerve supply as well, and that unless our interference is early, all these become involved.

The symptoms are virtually but three; pain, nausea, vomiting, and constipation. If these symptoms appear seventy-two hours after operation, it usually means obstruction, and every hour's delay in getting into the abdomen increases our mortality. To give purgatives at this time is positively criminal. Dr. Charles H. Mayo says that he has never seen a patient die of an unnecessary exploratory incision, but that he has many times seen death result because it was made too late. Horsley, I think, is credited with the saying, "There is such a thing as a surgeon being so intoxicated with his own dexterity, that on some occasions it overbalances his surgical judgment."

We may have done a clean operation, left no raw surfaces behind, and we are unwilling to believe there can be such a thing as obstruction. We then resort to our favorite enemas,

eserin, pituitrin, etc., and all the while our patient is advancing from the first to the second or third stage of his obstruction. It may take "guts," you say, to go back in, but if you find your second enema is not successful and the pain is not relieved by a reasonable dose of morphia, you may rest assured that you have a condition that is going to require sugical relief.

The treatment may be summed up as follows: First, removal of obstruction; second, relief of dehydration; third, relief of hypochloremia; fourth, relief of starvation; fifth, drainage of the small bowel. If the case is seen early before there has been dehydration, and loss of chlorides with a marked rise in non-protein nitrogen, perhaps the simple operation of removal of the obstruction will suffice. If, however, the case has advanced further, the death rate will be materially lowered by first restoring the cloride and water balance by administering intravenously and subcutaneously, large quantities of salt solution, 3 to 5 per cent intravenously and 2 per cent subcutaneously, after which an enterostomy should be done, picking up the first distended loop of small intestine you find.

Usually from four to six liters of hypertonic salt solution can be given the patient in twenty-four hours. These patients, of course, cannot take food by mouth, so they should be nourished by giving glucose in from 10 to 25 per cent solution along with the saline.

Regarding the question of anesthetic, I believe it makes but little difference, provided that before a general anesthetic a thorough stomach lavage is given. A general anesthetic enables me to do as the late Dr. John Murphy used to say, "To get in as quickly as possible and get out quicker."

Regarding the antitoxin of Welch, I have had no experience, but theoretically it should be of value, and I hope to try it out in my next case.

I realize I have only scratched the surface in this most important subject, but I have endeavored to bring out in this short time at my disposal the most essential points, and of these, I consider early operation the most important.

Dr. Ralph H. Chaney, Augusta, (closing): The unique feature of my case lies in the early age of the patient. I apologize for presenting only one case, but it is the earliest, I think, on record. This patient was only four weeks of age, and the earliest case recorded in the literature available was in a seven-weeks-old child.

A NEW MODE OF ARTIFICIAL INSEMINATION*†

G. LOMBARD KELLY, M.D.,
Augusta

Introduction

Artificial insemination in lower animals has been practiced for a long time and authentic reports of its success in the human are on record (8). So far as can be learned from careful search of the literature, the only avenue of approach in these cases has been by way of the vagina, the sperm having been deposited in this organ, the cervical canal or uterine cavity.

Another approach occurred to us, namely, the application of sperm at the upper end of the genital tract, directly upon the surface of the ovary. Just as is the vaginal method, a suitable time for the insemination would have to be selected and that time should preferably be just before ovulation.

Since this method of artificial insemination would require operative measures in exposing the ovary, it was necessary to approach the problem on an experimental basis in lower forms. On account of the thorough knowledge of the estrus cycles in the common laboratory rodents (with the exception of the rabbit) and because of the frequency of the cycles, one of these animals seemed to offer the best chance of success. We therefore selected the guinea pig for first choice, but decided to use the white rat as well.

By the vaginal smear method discovered by Stockard and Papanicolaou (10) it is possible to recognize the stages of estrus in certain forms and also by the cellular content of these smears to time the act of ovulation. For example, in the guinea pig, the female will copulate only in stage 1 of estrus (Fig. 1.). Within a comparatively short time after copulation large numbers of spermatozoa have reached the ovarian bursa and await the bursting of the graafian follicle. In the meantime, stage 2 of estrus (Fig. 2) has passed

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1929.

†From the Department of Anatomy of the University of Georgia Medical Department, Augusta, Ga.

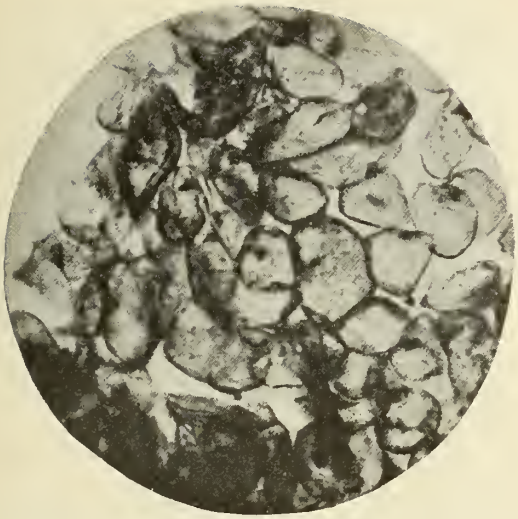


Figure I
First stage cells; gray or pale blue and not nucleated. Copulatory stage of estrus.

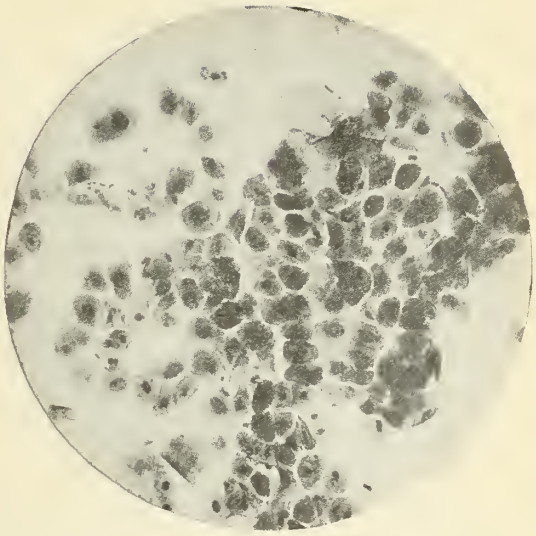


Figure II
Second stage cells, nucleated, with pink or red cytoplasm.

and the leucocytes, harbingers of stage 3 (Fig. 3) are arriving in the vagina. At the junction of stages 2 and 3, with the advent of the first leucocytes, ovulation occurs.

We therefore used female guinea pigs in the copulatory stage, with one exception, for the insemination experiments. In order to avoid unnecessary sacrifice of animals sperm was usually obtained from males killed for complement by the Wassermann laboratory, the animals being brought to the operating room to be sacrificed.

Description of Method

In our colony of animals males and females are kept isolated except when being bred. As shown by the writer and Papanicolaou (6) the vaginal orifice in the guinea pig cicatrizes between estrus periods and during pregnancy and opens at the time of estrus by a cornification process resulting from the general hyperemia of the sexual system. Our animals are examined daily by a student assistant, who takes vaginal smears on all females with newly open vaginas.

While carrying on this work, smears reported by the assistant as stage 1 were checked and if found satisfactory, the corresponding animals were used for the experimental procedure.

Since the best approach in an operation on the ovaries of rodents is through the back, a suitable operating-board, with a contour slightly convex upward, was devised so that the animal could be tied on it in the prone position. With the animal in place, concentrated solution of sodium sulphide was used to remove the hair from the two operation sites, which lie in the angle between the last rib on each side and the verteral column. The skin was prepared with iodine and anesthesia begun.

In the experiments described herewith we used ether anesthesia and it is interesting to note that the ether absorbed by the blood did not have any untoward effect on the viability of the ova or spermatozoa in the tubes.

In anesthetizing small animals, such as guinea pigs and rats, it is advisable to use a device similar to that pictured here (Fig. 4) so that only dry ether vapor reaches the nostrils of the animals, for otherwise, post-operative pneumonias are apt to be frequent. A Mohr's pinchcock is helpful in regulating the outflow of the gas, as the rubber bulb can be inflated to a considerable degree and the escape of air from it into the ether-bottle made as fast or slow as desired. This is especially desirable after the animal is fully anesthetized.

I should like to add that in more recent work we have adopted local anesthesia with 0.5 per cent procain as routine and that it works just as satisfactorily on the whole and never kills any animals, as ether occasionally does.

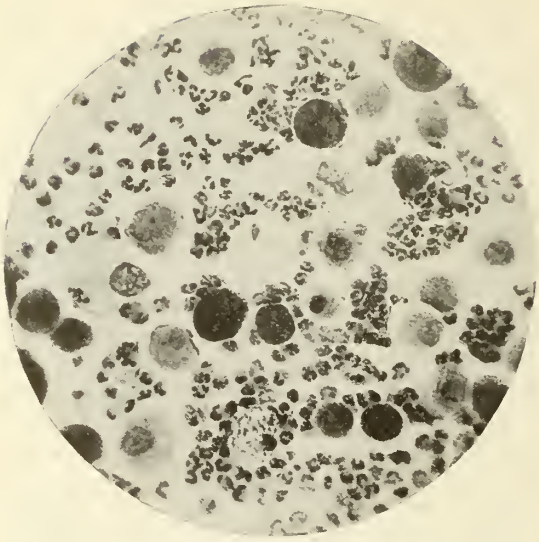


Figure III
Third stage of estrus, showing large numbers of leucocytes among the desquamated vaginal epithelial cells.

All operative procedures were done with aseptic technic. Sterile towels and sponges and sterile instruments insured a minimum risk of infection and it is noteworthy that no infections occurred. The operating personnel consisted of surgeon, assistant surgeon, anesthetist and general assistant. The last acted as nurse and also helped in dissecting the freshly killed males to obtain sperm.

At each operative site an incision about 1.5 cm. long was made and the ovary was exposed by extruding it through the slit in the peritoneal bursa. After inspecting the ovary to ascertain the number of ripe follicles present, it was dropped back into place and a hot sponge was laid on the wound. When this had been accomplished on both sides, the males were sacrificed.

As soon as the male had been bled (for complement) or, if sacrificed only for the experiment, as soon as dead, the abdomen was opened and the vasa deferentia exposed from the testicles to the prostate. Each was now caught at opposite extremities with a small hemostat and dissected free. One hemostat caught both the distal (prostate) ends, as they lay close together and could be excised with one snip of the scissors. Both vasa were now removed to the operating table and the hemostat at the distal end snipped off. With a pair of forceps the sperm was now stripped out simultaneously upon a sterile,

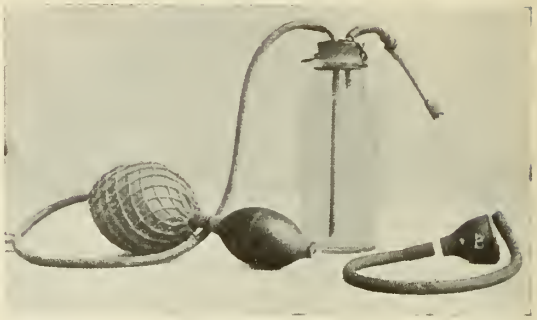


Figure IV
Anesthetizing apparatus: a, ether bottle; b, half of old rubber bulb for nose piece.

dry glass slide. Two or three large drops were usually obtained in this way.

Each ovary was now exposed again in turn, extruded from its bursa and smeared with sperm from the end of a scalpel. The bursa was next pulled back over the ovary and the latter replaced in the abdominal cavity.

The incision was closed with two layers of sutures, one layer of two or three sutures in the muscle and one of three or four in the skin. Round needles were used for the muscle, but good quality Keith needles are needed for guinea pig skin, which is unusually tough. No. 0 or 1 plain catgut was the suture material.

When sperm was obtained from males killed for complement, that from one male was used on one ovary and that from another was placed on the opposite side. Successful insemination on each side by this method would result in young born at the same time having different male parents.

The animals as a rule recovered from the anesthetic within 3 or 4 hours or less and thence on behaved just as if nothing had happened.

Results

The average duration of the estrus cycle in the guinea pig is 15½ to 16 days. After an animal was inseminated it was carefully watched for the return of estrus. This is very easy to determine in this animal, since the vaginal orifice actually grows up between heat periods and during pregnancy, a cicatrix being formed at that site (6). As long as the vagina is thus closed the animal is not in estrus. If it did not return to estrus at the

Figure V
Animal 1033 and her two offspring, the first we obtained by this method.

expected time, the next step was a vaginal curettage at three weeks after insemination. By this time the vaginal mucosa, if pregnancy has supervened, has undergone a change from stratified squamous to high columnar mucous epithelium. These cells when scraped out are characteristic and within certain limitations are diagnostic of pregnancy in this animal (4). The third test for pregnancy is palpation. This is usually applicable by the fourth week or a few days earlier and is a positive test for one with experience in performing it. Table 1 shows the results in condensed form.

In spite of the fact that animals No. 1033 and No. 1057 did not return to estrus after insemination and also were definitely pregnant according to the curettage test and palpation, it was feared abortion might cause the loss of actual evidence. We therefore decided to expose the uterus in each case and see what it held.

No. 1033 was operated on May 1, 1928, and the right uterine cornu exposed. One fetus was discovered. This animal gave birth on June 3 to two young, one agouti, like herself, and one black, white and red (Fig. 5). It is probable that one young came from the left cornu and had a different father, as two males furnished the sperm for the insemination and internal migration of the ovum does not occur in the guinea pig (5, 7). On the other hand, there may have been two fetuses on the right side and the cornu not pulled out far enough at the operation to show both.

At the time of insemination of No. 1057 the right ovary could not be located and sperm was placed only on the left side, where, fortunately, three ripe follicles were seen. At operation three fetuses were discovered in the left uterine cornu. The incision was rather small and some difficulty was experienced in replacing the enlarged uterus in the abdominal cavity. No doubt the young were injured, as the mother aborted six days later.

It is worthy of note that animal 1009A was only 3½ months old at the time of insemination and that she was inseminated at her fourth estrus. She was quite a small animal compared with the others used.

The incidence of successful impregnation, omitting No. 1026, which was operated on in the third stage (that is, after ovulation), is 66 2/3 per cent. This compares favorably with natural insemination, which probably does not exceed 90 per cent.

It should be added that our experiments with the rat were unsuccessful. This animal has a complete peritoneal bursa surrounding the ovary, which is thus entirely cut off from the peritoneal cavity (9). Rupturing this sac always caused considerable hemorrhage. Injection of sperm into the bursa from a tuberculin syringe with a fine needle or from a capillary pipette with a rubber bulb was likewise futile. Moreover, in rats the semen was not usually soft, milky, and free-flowing as in the guinea pig, but inclined to a more solid, lumpy consistency.

Since this first series of experiments we have continued artificial inseminations on animals in stage 3 estrus, hoping to prove that spermatozoa would follow the ovum down the uterine tube, but so far, in six cases, we have been unsuccessful.

Discussion.

It is problematic whether these findings have any clinical significance. If it were possible to obtain human sperm in an aseptic condition and to foretell the exact time of ovulation in woman, it is probable that successful impregnation could be accomplished by this method. Suitable cases would be those in which a laparotomy was necessary for some other purpose.

Incidentally, recent work in the monkey

seems to confirm previous observations in the human and to show that ovulation in woman occurs about the middle of the intermenstrual period (1). The period of greatest sexual desire in woman (which is in the first half of the intermentsrual period) coincides with the copulatory stage in lower forms. In both cases copulation at this stage precedes ovulation, thus insuring the presence of spermatozoa in the region of the ovary when ovulation finally occurs. The unfertilized ovum probably can not remain viable in the female genital tract as long as the spermatozoon. This no doubt explains the observation made in Germany during the recent war that by far the larger number of conceptions of women whose husbands had short leave, occurred in the first half of the intermenstrual period (2).

This method also opens a new avenue of investigation into the behavior of spermatozoa in relation to the ovum and to the uterine tube. As mentioned previously, we have tried inseminations in stage 3 of estrus, when the ovum has already entered the uterine tube, but we have had no success thus far. This would seem to indicate that the spermatozoon will not go down the tube to fertilize the ovum or that the latter cannot be fertilized that long after it leaves the ovary.

We have tried placing a large quantity of sperm in the ovarian bursa, sewing the animal up and leaving her for four to twenty-four hours, and then looking for sperm in the uterine cornu excised at the end of that time. In no case have we found any.

If fertilization occurred in stage 3 inseminations, it could be held to prove an "ovotropic" influence in the mammalian ovum, something heretofore undemonstrated.

It is a noteworthy fact that spermatozoa in the guinea pig can reach the bursa ovarica and teem in large numbers around the ovary within a very few hours after copulation, whereas it requires four days for the combined ciliary motion and peristaltic movements of the uterine tube to carry the much larger ovum less than the distance traversed by the male germ cells. If the extremely small spermatozoa depended upon reverse peristalsis for their progress through the tube, as has been claimed, how long would it take for them to reach the ovary?

It should be added that all the young born after successful insemination by this method went longer than term by 2 or 3 days. Whether the effects of the operation caused a delay in the early progress of the ovum we cannot say.

It is of interest to note that the females successfully inseminated in these experiments have been impregnated in the normal way and given birth to normal young; also, that some of their female offspring have reached sexual maturity and likewise produced young in the normal manner.

Incidentally, these successful insemination experiments prove that the spermatozoa are capable of fertilizing the ova without the influence of the accessory secretions from the seminal vesicles and prostate (as the sperm was taken from the vas deferens).

It will have to be determined later whether it is possible by this method to produce hybrids between animals that will not or can not naturally copulate.

In so far as we can find from a careful search of the literature, no previous attempts have been made to accomplish artificial insemination by this method. Kampmeier (3) injected spermatozoa of the dog into graafian follicles of the bitch; but his purpose was not the same as ours and he did not record any fertilizations.

Summary and Conclusions

1. Artificial insemination by way of the ovarian bursa in the guinea pig can be accomplished in about two-thirds of the trials, if females are selected during the first stage of estrus and a suitable technique is employed.

2. Guinea pig spermatozoa are capable of fertilizing the ova without the influence of the secretions of any accessory sexual glands, such as the seminal vesicles or prostate.

3. The young born by this method are normal in every way and thrive just as the progeny of natural insemination.

4. It is possible by this method to produce young born at the same time from one mother but with different male parents.

5. This method opens up a new pathway of investigation into the behavior of the

TABLE I.

Number	Operation	Side	Return to heat	Vaginal Curettage	Palpation	Delivery	Young
1033	3-26-28	Both	----------	4-17-28 Positive	Positive	6-3-28	Two
1029	4-16-28	Both	5-5-28	----------	----------	----------	----------
1057	4-25-28	Left	----------	5-14-28 Positive	Positive	6-3-28	Abortion
1010	5-3-28	Both	----------	5-26-28 Positive	Positive	7-10-28	Two
1009A	5-5-28	Both	----------	5-26-28 Positive	Positive	7-13-28	One
1026*	5-5-28	Both	5-19-28	----------	----------	----------	----------
1007	5-15-28	Left	5-31-28	----------	----------	----------	----------

*Stage 3. All others operated on in stage 1.

spermatozoon in relation to the ovum and the uterine tube.

6. Results of several attempts at artificial insemination in stage 3 of estrus seem to indicate that the spermatozoon will not follow the ovum down the uterine tube or that the latter cannot be fertilized that long after it leaves the ovary.

LITERATURE CITED

1. Allen, E.: The time of ovulation in the menstrual cycle of the monkey Macacus Rhesus. Proc. Soc. Exp. Biol, and Med., 23:381-3, (Feb.) 1926.
2. Asdell, S. A.: Time of conception and ovulation in relation to the menstrual cycle. J. A. M. A., 89:509-11, (Aug. 13) 1927.
3. Kampmeier, O. F.: Experiments on fertilization and parthenogenesis in the mammalian ovary and on the production of the corpus luteum. Am. J. Anat., 43:45-76, (Jan.) 1929.
4. Kelly, G. L.: Vaginal curettage as a means of diagnosing pregnancy in the guinea pig. Anat. Rec., 40:73-384, (Nov.) 1928.
5. Kelly, G. L.: Additional observations on internal migration of the ovum in the sow and in the guinea pig. Anat. Rec. 40:365-372, (Nov.) 1928.
6. Kelly and Papanicolaou. The mechanism of the periodical opening and closing of the vaginal orifice in the guinea pig. Am. J. Anat., 40:387-412, (Nov.) 1927.
7. Kinney, P. B.: Internal migration of the ovum in the guinea pig. Am. J. Obst. and Gyn., 8; P. 198.
8. Meaker, S. R.: The place of artificial insemination in the treatment of sterility. Boston Med. and Surg. J., 191:495-7, (Sept.) 1924.
9. Robinson, A.: On the position and peritoneal relations of the mammalian ovary. J. Anat. and Phys., London, 21: 169, 1887.
10. Stockard and Papanicolaou. The existence of a typical estrus cycle in the guinea pig. Am. J. Anat., 22: 225-284, (Sept. 1917.

DISCUSSION ON PAPER OF DR. KELLY

Dr. Homer R. Blincoe, Atlanta: I think Dr. Kelly is to be commended for the originality of his idea, and for his ingenuity in carrying it out. The subject was so thoroughly presented that there is little left to say, particularly as so few experiments of this nature have been described. Dr. Kelly mentioned the work of Dr. Kampmeier of the University of Illinois, the results of which were chiefly negative. Dr. Kelly says the findings are problematic as far as their practical value is concerned, but he has called to our attention the possible use of the method in cases of sterility, particularly if a laparotomy for other purposes might be necessary. I regard his work as a distinct contribution to biological science, of which medical science is a part and upon which medical practice is largely builded. It is not necessary to recall to this assembly the fact that immediate practical use of a procedure does not necessarily determine the real value of the discovery. . . .

Dr. G. Lombard Kelly, Augusta, (closing): There is one thing of interest in regard to the statement Dr. Benson made about sterility. Recent work seems to prove that ovulation takes place in the middle of the intermenstrual period. By the vaginal smear method we have been able to obtain products of female sex hormone that can be biologically assayed. Squibb's Amniotin and Parke, Davis and Company's Estrogen are preparations of this type. It has also been shown that anterior pituitary transplants cause hyperovulation in lower forms. I would suggest, then, that in sterility cases in which there is probably menstruation without ovulation the administration of female sex hormone (and possibly of anterior pituitary in conjunction) at the appropriate time in the sexual cycle might result in the production of pregnancy, either from natural or artificial insemination.

IMPORTANT NOTICE

Elsewhere in this issue, we are publishing an abstract of the Constitution and By-Laws of the American Medical Association governing the Scientific Assembly.

THE THIRTEENTH INTERNATIONAL PHYSIOLOGICAL CONGRESS

GEORGE BACHMAN, M.D.,
Professor of Physiology, Emory University, Emory University

The International Physiological Congress was held at Boston, during the week of August 19th. It was the first time that an International Physiological Congress was held in this country. This meeting is, therefore, of importance in the history of physiology and medicine in America. There were over 1,600 members and associate members enrolled. Forty-two nations were represented.

The opening meeting was held in Sanders Theatre of Memorial Hall with addresses of welcome by Surgeon General Cummings of the U. S. Public Health Service on behalf of the U. S. Government, by Lieutenant-Governor Youngman of the Commonwealth of Massachusetts, by President Lowell on behalf of Harvard University, and by Professor Howell, President of the Congress. Professor Howell made a short address in which he said in part: "It was only about fifty years ago, barely the space of a single lifetime, that physiology in this country began its career as an independent science with special facilities for instruction and research and for the training of its own group of workers." He then reviewed briefly the work of the earliest physiological investigators of this country and sketched the present status of physiology in the United States in the following words: "From these modest beginnings have sprung the splendid laboratories in experimental physiology and medicine which we now possess. Our workers are numbered by the hundreds and our contributions to the advancement of the subject increase constantly in importance. We look upon this meeting of the Congress at Boston as a recognition that American physiology has come of age, and has been admitted to full membership in that old world group to whom we have so long looked for guidance and inspiration." President Howell closed his address by recalling the work of distinguished physiologists who have died since the previous Congress and asked the audience to stand in silence as a mark of respect to their memory.

The main address of the evening was delivered by Professor Krogh of the University of Copenhagen on the "Progress of Physiology." In the course of his address he made the interesting statement that in 1901 the Zentralblatt reported but 100 papers on Physiology published in America or by American authors, or 2½ per cent of the total publications; while in 1926 there were reported 3,500 American papers, or nearly 20 per cent of the total publications. The general trend of thought among physiologists concerning the relation of this science to medicine is well exemplified in the following excerpt of Professor Krogh's address:

"Physiology as a science has taken its origin from the necessities of practical medicine, and even now the large majority of workers in physiology have had the benefit of a medical education and hold their appointments in medical schools. Nevertheless we all hold physiology to be an independent science, and most of the work done in physiological laboratories has no direct relation to medicine. The line of development which I think should be followed is to establish in one direction a branch of physiology which is much more intimately in contact with practical medicine and in the other direction a branch which is much more independent.

I think that work done on this side of the Atlantic has contributed more than anything else to the growing understanding of the fact that the problems of disease are mainly physiological and cannot be solved by the methods of clinical observation, morbid anatomy, bacteriology or serology alone, even in cases where these sciences are absolutely essential. It is the functional reaction of the organism to the attack of disease and to the therapeutic measures which is after all the central problem. A large and increasing proportion of physiological research is carried on in hospital laboratories by men and women who are at the same time practicing the art of healing. Much of this work is very valuable, but sometimes the outlook is rather narrow, and I believe that a great deal could be gained by

expert physiological direction and coordination. I think the time has come when special chairs and laboratories should be established for the physiology of disease, morbid physiology or experimental medicine, if you prefer that name. The main point is that the leaders of such laboratories should have no regular duties connected with the treatment of patients, but they must have a small number of beds at their disposal for the temporary study of selected cases, and they must, of course, be in close and constant contact with the clinical wards. It goes without saying that they must have facilities for studying disease experimentally on animals. Within the field of blood circulation and innervation of blood vessels with which I am personally acquainted, I have had the desirability and even necessity of cooperation with practical medicine brought home to me again and again. I have learned also that the theoretical problems regarding kidney function require for their solution a close study of clinical cases, and I cannot doubt for a moment that great benefit to patients will ultimately result from such a study. Much can be done in this direction by means of existing facilities, but I anticipate an acceleration of progress from the creation of special chairs as outlined, and I feel sure that the resulting contribution to practical medicine would amply and within a short space of time repay the communities for the initial outlay on such departments and for their maintenance."

Owing to the large number of papers presented—over 500—meetings were held simultaneously in five or six different places. The committee had grouped the papers in accordance with their similarity of topics and since a board was placed in each room giving the number of the paper being read in all other rooms it was possible for anyone interested in some particular paper to pass to another room in time to hear it. The official languages were English, French, German, and Italian.

It would be out of the question to make even an attempt to report on the majority of the papers presented before the Congress. I will therefore refer to but a few having a practical interest. The full and corrected Proceedings of the Congress will appear in The American Journal of Physiology.

Agduhr of Upsala states that cod liver oil in therapeutic doses has an unfavorable, toxic influence. He states that fatty degeneration, connective tissue formation and calcareous infiltrations are fairly common lesions. These lesions are especially noticeable when large doses are given for a long period of time. Radiation of codliver oil with ultra-violet light diminishes its toxic properties.

Archangelsky of Ukraine has studied the effect on conditioned reflexes of grafting the sex glands in dogs. He finds that the male sex glands have an action on brain activity consisting in removal or weakening of internal inhibition, possibly accompanied by augmentation of excitatory processes. Ovarian transplantation into bitches has no influence on their cerebral activity.

A great many papers were presented on the physiology of the kidney. Most of the work was done on the frog's kidney because of the ease with which direct withdrawal of urine from Bowman's capsule can be accomplished. As a whole the experiments favored the view that the function of the capsule is one of filtration.

A very interesting series of photographs obtained by infra-red light was shown by Bertrand and Besancon of Paris. They used this method in studying the convoluted tubules of the kidney. They showed certain definite changes within the cells as the result of diuresis, the effects of acidosis, and poisoning with uranium nitrate.

Boldyreff showed that disturbance of the acid-base balance in the stomach and small intestine may produce anemia. He showed that the introduction of 0.5 per cent HCl (up to 400 c.c. daily) into the stomach caused in two or three weeks a drop of erythrocytes of more than 1,000,000 with the appearance of pathological forms. The same thing occurs when acids are introduced in various regions of the small and large intestine. It requires several weeks before the cell count returns to normal. He suggests that an excess of acids in the digestive apparatus, due either to an excess of secretion, deficient

(Continued on Page 539)

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

NOVEMBER, 1929

VALUE OF ORGANIZATION

Organization is today the keynote of influence and power. It is absolutely necesasry for the attainment of progress and success in any great undertaking. This fact has been definitely established in the profession of medicine. In order to perfect its work, to attain its aspirations and to render a needed service to the prefession it has been found essential that the physicians of this and other states should unite and organize into State Medical Associations. From such Associations great good redounds to the entire profession, individually and collectively, as each of us have been equally benefited by their splendid work. I need not detail here the advantages of membership in *our* Medical Association of Georgia, except to mention the following facts which must naturally occur to you. By social intercourse it has developed a mutual confidence among physicians thereby allaying fancied enmities and establishing an entete cordiale— a fellowship long desired. You doubtless know that organized medicine has prevented the raise of narcotic tax to physicians; has held down the import tax on certain surgical instruments; has made it possible for you to deduct medical association convention expenses from your income tax; renders medical relief in disaster, using you as its agent, whereby you benefit indirectly; supports public policies and work of the State Board of Health, which aid you in protecting yourself, your family and your patients against disease; and it furnishes you with laboratory facilities and special treatments; it supplies you with current developments in the entire field of medicine, at its conventions and through its journals, and above all it establishes your prestige in the community as an upright man and an ethical physician meaning that you are to be regarded as up to the standard of the best men of your profession. Pages could be filled with the accomplishments of our Association and endless benefits of its membership could be recited but what has been mentioned should suffice to convincingly impress every physician with the absolute necessity of being a member in good standing of the Medical Association of Georgia.

When such an organization is functioning, funds are essential for its maintenance. The meager dues paid by the membership are the only source of these funds. For the past several years the expenses of the Medical Association of Georgia have been in excess of the income. The legal cost of medical defense suits and the legislative program have been costly. At the Macon convention of our Association the grave problem was presented relative to the financing of the organization. It was essential that we do one of two things, increase the income of the Association or eliminate medical defense which would make it possible to retain $5.00 per year dues. It was evident that if medical defense was retained the dues had to be raised. After much deliberation by the wiser councilors of the Association it was recommended and adopted that the dues be raised to $7.00 per year, which will give funds only sufficient to take care of the essential needs of the Association. It was not felt that we could afford to sacrifice medical defense, as many physicians, especially through the country districts, would not protect themselves with other insurance. This would in some instances, sooner or later, bring about unfortunate suits which, when not fully protected, would reflect on the profession of this state.

The increase in dues is only two dollars a year or one-half of one cent a day. The great benefits to be derived have been enumerated. No right thinking man can do other than support this Association which renders him such vital services. The dues of this Association are the lowest of any Medical Asosciation in the United States giving medical defense. I most earnestly appeal to you for your hearty co-operation and support of your Association.

WM. R. DANCY, M.D.
President.

MEDICAL EXPERT TESTIMONY

In times past the medical man was considered to be the exemplar of truth and probity, unpurchasable, and only testifying when put on the stand under oath absolutely impartial without regard to fee or reward.

Within recent years, judging from all the newspaper accounts, it appears that men can be procured, and those of prominence will make their examinations in such a manner to favor the criminals who are to be tried or under trial in our courts. The public has begun to comment upon this to such a degree that the medical profession is becoming most seriously censured, whether justly or unjustly. In truth some of the cases that have been in the courts have become almost a stench in the nostrils of the higher class moral public. If there be no change in affairs of this kind, medical expert testimony will be regarded as either a joke or a purchasable product, the highest bidder getting the most valuable evidence.

In many of these cases, however, the shrewdly educated lawyer has learned to train his client to simulate many diseases that may deceive the very elect. Charity makes us hope that this latter may protect many of our physicians and lead to their deception. It is becoming so common among the rich criminals that the public is too fast losing confidence in the profession, which they have been taught to revere and to love from birth until death. Some restraining influence must be thrown around the medical profession to protect them from either this imposition or the public from being imposed upon by untrue testimony. The legal profession has learned so much about many of the diseases that their clients may simulate, and some of them evidently are without conscientious scruples and are only hoping to gain the freedom of their clients, even though they themselves know the absolute guilt of those whom they are defending.

Let's trust that this condition may soon be remedied and the truth stand out as to which profession is the one at fault.

E. C. DAVIS, M. D.

CANCER CONTROL—A PUBLIC HEALTH PROBLEM

Some weeks ago "Campaign Notes," the official organ of the American Society for the Control of Cancer, carried a leading article by Dr. Joseph C. Bloodgood under the above title. It had already occurred to the writer (1) that the State Board of Health is now in a better position to do this work than the Medical Association because cancer control is purely a matter of education, both of the doctors and the public. This is undoubtedly one of the functions of the public health authorities.

While cancer cannot be controlled or prevented by the means ordinarily employed against contagious and infectious diseases (and in that sense will not respond to quarantine), its morbidity and mortality can be reduced by education such as our Board of Health is conducting among the midwives of Georgia in their effort to reduce the mortality in puerperal cases. The midwives come into closer contact with the rural families of both races than the doctor can hope to do for many years. Consequently, they hear complaints of the older women that would never reach the ear of a medical man. If they were prepared with proper instructions on the early symptoms of cancer, they could insist that these people consult a physician. We know this is true because so many women say, "Oh, I couldn't tell the doctor, for I'm afraid he would think I was just foolish if I told him about a lump in my breast that didn't hurt or about my sickness coming too often."

For the next few years it would probably be better for the Board of Health to limit its instruction to the early symptoms of cancer of the breast and uterus. By increasing slightly the time allotted the instructor, this additional training could be combined with the course now being given midwives.

The Medical Association, through its Cancer Commission, can work with the Board of Health in helping to secure the aid of the Parent-Teacher Association in every section of the state. We feel that these are just the women to get interested in the subject, but the cost of a campaign would be too much

for our Association to undertake at this time. However, we hope that every member of our Cancer Commission will use all the influence in his power to have this subject added to the health campaign of the Parent-Teacher Association. Our president, Dr. Dancy, is taking a great interest in cancer control and never fails to mention the importance of the subject.

We want to thank Dr. Bloodgood for his splendid suggestions and we hope he will continue to carry on this work for many years to come.

J. L. CAMPBELL, M.D.

(1) The writer was just leaving for the Twelfth District Medical Society meeting to make an address on cancer control and had selected the title, "Is Cancer Control a Public Health Problem?" when "Campaign Notes" came with Dr. Bloodgood's article on the front page.

REVISION OF THE UNITED STATES PHARMACOPEIA

One hundred and nine years ago the first Pharmacopoeial Convention met in the Capitol at Washington. Every ten years since that time the Convention has met to revise the Pharmacopoeia. This is said to be the only organization in America which meets only once in ten years.

The Eleventh Decennial Pharmacopoeial Convention has been called for Washington, D. C., May 13, 1930, and should bring together delegates from more than one hundred and twenty-five authorized bodies.

For the first thirty years of its existence the Convention was composed of medical delegates only, but since the admission of pharmaceutical delegates in 1850 they have increasingly outnumbered the medical delegates. At the present time delegates are allowed from the following authoriized bodies: National medical, pharmaceutical, dental and chemical associations; state medical and pharmaceutical associations; medical and pharmacy colleges and the many scientific bureaus of the national government.

The method of revision is as follows: The Committee of Revision of the U. S. P. X. sends to each delegate a questionnaire which contains the names of some four hundred drugs, chemicals and preparations which were official in the Eighth and Ninth Revisions but which were not admitted to the U. S. P. X. The delegate then carefully examines the above mentioned medicinal products in order to determine to what extent there is professional demand for them. From the recommendations of the questionnaire, statistics are compiled for the Convention. The Convention lasts one week and a Committee of Fifty is chosen to revise the Pharmacopoeia for the needs of the next decade.

This great Convention is of paramount importance to every physician and pharmacist in the United States and I take this occasion to urge every eligible organization in Georgia to have its delegates at the Convention. If any fail to send delegates and the U. S. P. X. is not to their liking they will have only themselves to blame.

This is a most worthwhile undertaking and each state should meet its obligation and do its part.

E. A. B.

AMERICAN MEDICAL ASSOCIATION

Abstract of Constitution and By-Laws Scientific Assembly

Chapter XII—REGISTRATION

Fellows, Affiliate, Associate and Honorary Fellows and Invited Guests only shall be allowed to register or to take part in the work of any of the sections of the Scientific Assembly of the Association.

A Fellow shall be eligible to register at an annual session only after he has paid all of his current indebtedness.

A Fellow shall not be permitted to take part in the proceedings of the Association or of any of the sections until he has registered his name and address in the registration office.

A Fellow on registering shall designate the section in which he wishes to be enrolled, but shall be enrolled in one section only at any Scientific Assembly.

CHAPTER XIV—SECTIONS

Section I. Titles of Sections of Scientific Assembly—The Scientific Assembly of the American Medical Association shall be divided into the following sections:

1. Practice of Medicine.
2. Surgery, General and Abdominal.
3. Obstetrics, Gynecology and Abdominal Surgery.
4. Ophthalmology.
5. Laryngology, Otology and Rhinology.
6. Diseases of Children.
7. Pharmacology and Therapeutics.
8. Pathology and Physiology.
9. Nervous and Mental Diseases.

10. Dermatology and Syphilology.
11. Preventive and Industrial Medicine and Public Health.
12. Urology.
13. Orthopedic Surgery.
14. Gastro-Enterology and Proctology.
15. Radiology.
16. Miscellaneous Topics. (Amended, 1925).

Section 7. Who May Take Part In Section Work—Fellows and Associate Fellows only shall have the right to participate in the business deliberations of a section. Fellows, Affiliate, Associate and Honorary Fellows, and Invited Guests may present papers and take part in the scientific discussions.

Section 10. *Time At Which Titles Must Be In*—Titles of papers to be presented to the section must be in the hands of the secretary of the section at least thirty-five days before the first day of the Scientific Assembly. With the title, the writer shall submit an abstract of the paper not less than thirty or more than one hundred and fifty words in length and an estimate of the time required to read his paper.

Section 11. *Length of Papers and Discussions*—The time allowed for the presentation of a paper before a section shall be limited to fifteen minutes. No one shall discuss any paper more than once, nor for longer than five minutes except with the unanimous consent of those present. A section, by the unanimous consent of its officers and with the approval of the Council on Scientific Assembly, may arrange for one paper at each annual session which will not be subject to restrictions, as to time or length, affecting other section papers. (Amended, 1928).

Section 12. *Number of Papers On Program*—The number of papers, including addresses, on the program of any section shall not exceed twenty-five.

Section 13. *Can Present Only One Paper At An Annual Session*—A Fellow shall present no more than one paper at any Scientific Assembly.

Section 14. Any Fellow accepting an assignment on a section program and without valid reason failing to be present to read his paper at the time designated shall be debarred from a place on any section program for a period of two years after the session at which he failed to keep his engagement. (Adopted, 1925).

Section 15. *Section To Provide By-Laws*—Each section may make by-laws for its own government, provided that they shall in no way conflict with the Constitution and By-Laws of the American Medical Association.

CHAPTER XV.—PUBLICATION

Section 1. *Papers Approved For Publication*—No paper shall be published as having been read before a section unless it has received the approval and the endorsement of each member of the executive committee of the section before which it was read.

Section 2. *Papers Must Be Ready For Publication*—Each author shall hand his paper to the secretary of the section immediately after it is read. The secretary shall endorse thereon that it has been read and shall hand it to the chairman of the executive committee. All papers approved by the executive committee shall be returned to the secretary of the section, who shall at once forward them to the editor of The Journal.

Section 3. *Papers "Read By Title"*—No paper shall be published as having been read before a section unless it has actually been read by its author, or unless, for special reasons, when the author has been present and prepared to read the paper, the section shall unanimously vote to have it read by title.

Section 4. *Papers The Property of the Association*—All papers and reports presented to a section and approved by the executive committee shall become the exclusive property of the Association, provided that the Board of Trustees may permit an author to publish his paper elsewhere than in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

STANDING RULES

Papers for Publication

Adopted at Boston, June 8, 1865.

"Resolved. That the several sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication (the Board of Trustees), except such as can be fairly classed under one of the three following heads, viz.: 1. Such as may contain and establish positively new facts, modes of practice or principles of real value. 2. Such as may contain the results of well devised original experimental researches. 3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance."

Honor Roll for 1930

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 5, 1929.

New Members—1929

Anderson, S. A., Milledgeville.
Brown, S. Ross, Atlanta.
Clark, W. B., Atlanta.
Dawson, A., Atlanta.
Dove, W. B., Macon.
Eskridge, Frank, Atlanta.
Field, C. H., Alpharetta.
Hall, C. E., Jr., Atlanta.
Heyser, D. T., Atlanta.
Lowance, Mason I., Atlanta.
Martin, C. T., East Point.
McAfee, J. B., Dalton.
Olds, Bomar, Atlanta.
Park, M. B., Atlanta.
Pierce, Lovick W., Macon.
Pomeroy, W. L., Waycross.
Sanford, Shelton, Atlanta.
Seaman, H. A., Waycross.
Turk, L. N., Jr., Atlanta.
Wright, E. S., Atlanta.

GEORGIA STATE NURSES' ASSOCIATION

Officers

President:
Miss Lucia Massee, R. N.,
Cuthbert, Ga.

First Vice-President
Miss Alice F. Stewart, R. N.,
University Hospital, Augusta.

Second Vice-President
Mrs. Mae M. Jones, R. N.,
Georgia State Sanitarium, Milledgeville.

Secretary
Mrs. J. F. Hawthorne, R. N.,
410 Arnold St., N. E., Atlanta.

Treasurer
Miss Jane Van De Vrede, R. N.,
131 Forrest Ave., N. E., Atlanta.

COUNCILORS

Miss Annie Bess Feebeck, R. N.,
Grady Memorial Hospital, Atlanta.
Miss Vera Mingledorff, R. N.,
209½ West Duffy St., Savannah.
Miss Margaret Dorn, R. N.,
1117 Telfair St., Augusta.
Miss Hattie Wilder, R. N.,
118 Stonewall Place, Macon.

23RD ANNUAL CONVENTION OF THE GEORGIA STATE NURSES ASSOCIATION

Miss Lucia Massee, R. N., of Cuthbert, Ga., was elected president of the Georgia State Nurses' Association, at the 23rd annual convention of this organization held in Rome, Ga., October 31st through November 2nd, succeeding Miss Annie Bess Feebeck, of Atlanta, who has held this office for the past two years.

About one hundred and fifty delegates attended the convention, in addition to a number of specially invited guests and visitors. Miss S. Lillian Clayton, R. N., of Philadelphia, President of the American Nurses' Association, and Miss Mary M. Roberts, R. N., of New York, Editor of the American Journal of Nursing, were guests of honor. Mrs. Helen LaMalle, also of New York, and director of nursing service of the Metropolitan Life Insurance Company, and Dr. Allen H. Bunce, Secretary of the Medical Association of Georgia, were other honored guests.

Convention arrangements were in charge of Mrs. E. P. Grant, of Rome, secretary of the 7th District Nurses' Association, who was ably assisted by the members of her Association and by the citizenship of Rome generally, and the convention was pronounced by visiting delegates as one of the happiest and most successful ever taking place in the state.

Miss Clayton and Miss Roberts came direct from the first biennial conference of the Southern Division of the American Nurses' Association, held in Birmingham, Ala., October 28-30. They remained throughout the meeting of the G. S. N. A., participating in several programs.

Miss Jane Van De Vrede, executive secretary of the Georgia State Nurses' Association and retiring president of the Southern Division, together with Miss Feebeck and a large party of Georgia nurses in attendance upon this conference, motored direct from Birmingham to Rome.

Miss Feebeck presided over all sessions of the G. S. N. A.

The first was opened at 10 o'clock Thursday morning, October 31st, with an invocation by Dr. Bunyun Stephens, of Rome, and was given over to the appointment of committees, reports of officers and the annual roll call of District and Alumnae Associations.

Official welcome to Rome and the 7th District was given by Mrs. C. D. Taylor, vice-president of the 7th District Association. Miss Lillian Alexander, president of the 5th District (Atlanta) made the response.

Dr. Allen H. Bunce, Secretary of the Medical Association of Georgia, gave the principal address at the second session on Thursday morning, his subject being "Doctors, Nurses and the Community." Dr. Bunce made a plea for better community cooperation and community hospital service.

Dr. James R. McCord, of Atlanta, representing the American Social Hygiene Association, and Dr. W. W. Young, mental hygiene specialist, also of Atlanta, and Miss Mary M. Roberts, of New York, were the chief speakers at the Private Duty Section meeting, Thursday afternoon. Dr. McCord's subject was "The Pevention of Congenital Syphilis."

Dr. Young discussed "Common Sense Attitude Toward Mental Diseases," and Miss Roberts interpreted "Nursing Ideals." She named honesty, courage, faithfulness, loyalty,

unselfishness, intelligence and a real desire to nurse, among the chief requisites for an ideal nurse, and said among other things that a nurse should have "not only a professional attitude, but a real sympathy for humanity. She must have a capacity for growing in knowledge and usefulness. This is her definite responsibility. She cannot stand still after graduation."

Miss Willie Chalkley, of Columbus, was elected Chairman of the Private Duty Section at the business session of this group, which was presided over by Miss Margaret Dorn, of Augusta.

"The Nurse and the Health of the Public"

Miss Clayton, President of the American Nurses' Association, delivered the principal address at the open meeting Thursday evening, after addresses of welcome by Hon. T. B. Owens, Mayor of Rome; Mr. C. O. Walden, President of the Rome Chamber of Commerce, and by Miss Beulah Carrington, of Dalton, Ga., President of the 7th District Association, responded to by Miss Feebeck. Her subject was "The Nurse and the Health of the Public," and she spoke of the importance of the nurse in her relation to citizenship. "If the strength of the nation lies in the the health of the people, then the nurse occupies a strategic position. She is, through her activities in the hospital, the home, the school and the community a vital factor in all efforts toward health achievement; and the success and extent of these efforts have been in direct ratio to the degree of understanding on the part of the community as to the true meaning of nursing education and its relation to the individual citizen.

The scientific work of physicians and surgeons today demands a definite, specific knowledge on the part of the nurse, and it has been necessary to change the content of nursing education. Too long has the economic need of the hospital been the main consideration in determining the content of the nursing course; too long has production been considered, and not preparation for the health needs of the community. Definite demands are made upon the nurse by the public, too. She must be schooled not only as a practitioner, but as a teacher; she must have a vision of right relationship, and a talent for effective presentation.

"No professional figure has been placed on a higher pedestal by popular esteem than the nurse. From the days of the Lady of the Lamp to the days of Edith Cavell and so to our own time the uniformed nurse, ministering to the sick, has been one of the most cherished pictures in the public mind. But there are occasions when nurse leaders cannot but wonder whether this esteem on the part of the public is not more of sentimental coloring than of practical point of view. It is being proven there is a lack of understanding which has been more than once a serious obstacle to the development of the nursing profession. How many patients know whether the nurse is qualified to practice in their state? What does a community know about the nursing standards in its hospitals—what preliminary education is required of the student nurse; how thorough is her training in the various diseases? It is a rare layman who is informed about these things and whether his hospital school is accredited professionally. It is the individual nurse by whom the profession is judged, and her attitude and contribution which makes or mars the standing of the profession in the eyes of the patient and the public. If the public is to understand nursing and cooperate in efforts to develop high standards through nursing legislation and education, if the community is to be nursed according to its needs, it will be because each individual nurse is living her professional life daily with these objectives in view.

"The need for understanding on the part of the public is plain, but has the profession considered its own responsibility for the health of the people, and its own obligation toward the citizenship of its members, by finding a way whereby the public may be informed? The profession has realized for many years the things the individual citizen should know of nursing, but it has been left for others to give the information, and it has not been given. The idea of telling about its own profession is new in nursing. It is only a short time since the ethical right to use publicity in the profession was universally questioned by nurses. But if the health of the community is a problem for which the the nurse has a responsibility, it is clear that accurate information of the profession must be given to the public.

"Publicity as approved by the American Nurses' Association, and stated by its publicity agent at National Headquarters, is conservative and accurate. It confines itself to one definite objective—that of telling the story of nursing organization, its ideals and its problems, in simple, straightforward manner. It is presupposed the patient has a right to know about the qualifications of the nurse who comes to his home. It is equally clear that he should be interested in the legislative measures in his state regarding nursing. What a community should know about nursing is that which can be told best by the nurses of the community in the course of their work—

always granting that they see their work as part of a whole and not as an isolated part of it. In other words, that they see not only the patient for whom they are caring, or the needs in their immediate duties, but thep lace that work has to fill and the demands it has to answer in giving the community adequate nursing care.

"We have said the health of the people is the strength of the nation; hence it is the possible patient who must be reached—the entire community. It is, therefore, the responibility of nursing in the community to make itself known."

G. L. of N. E. and S. O. P. H. N.

The Georgia League of Nursing Education and the State Organization for Public Health Nursing held joint meetings with the G. S. N. A., each having unusually fine programs, participated in by various nurse leaders over the state. Among these were Miss Helen Bond, Director of the Savannah Health Center; Miss Anne Lenore Simpson, Superintendent of nurses of the Archbold Memorial Hospital; Miss Helen Blanchard, of the Putney Memorial Hospital at Albany; Miss E. Alma Brown, Instructress, University Hospital, Augusta; Miss M. Celia Johnson, Superintendent of nurses, Piedmont Hospital, Atlanta; Miss Dora A. Kerschner, superintendent of nurses, Oglethorpe Private Infirmary, Macon; Miss Lucile Atkinson, Directress of nurses, Harbin Hospital, Rome, and others.

Among the topics treated in discussion were "What Value Staff Education," "Should Staff Education Be Promoted in Schools of Nursing?" "Should the Head Nurses and Supervisors be Considered a Part of the Teaching Unit?" "How May a Faculty for the School of Nursing Be Developed?" "How Far May Senior Students Be Used in Teaching Practical Nursing?" "What Factors Should Determine the Fitness of the Student Nurse?" Should Credits and Scholarship Be First Consideration in Retaining Students in Schools of Nursing?" etc. Miss Van De Vrede and others entered into the general discussion following presentation of papers.

Miss Roberts, editor of the American Journal of Nursing, and for many years herself a superintendent of nurses— at one time in Savannah, Ga.—summed up all this discussion in a masterly way. She stressed the need of leadership among nurses, and said what is perfectly obvious, that the only way to train nurses for positions of leadership and authority is by proper selection and development of students.

Mrs. Eva S. Tupman, President of the Georgia League of Nursing Education for the past two years, presided over the session of this organization on Friday morning, and conducted the business affairs at its close. Mrs. Tupman will continue in office the coming year. Mrs. Claude Taylor, of Rome, was elected as Vice-President; Miss Lillian Cumbee, of Atlanta, as Secretary, and Miss Anne Lenore Simpson, of Thomasville, as a member of the Board of Directors of the G. L. of N. E.

The Georgia League unanimously adopted a motion to invite the National League of Nursing Education to meet in Atlanta in 1931.

The State Organization for Public Health Nursing re-elected Miss Emma Habenicht of Atlanta as President, during the business session of this organization. Other officers elected were Miss Virginia Gibbs, of Marietta, first Vice-President; Mrs. Estella C. Westcott, of Savannah, as second Vice-President; Miss Evelyn Dugger, of Atlanta, as Secretary, and Mrs. Dorothy Treakle, of Savannah, as Treasurer. The nurse members of the Board of Directors elected were Mrs. Alma Albrecht and Miss Helen Hatch, of Savannah, and Miss Myrtle Jolly, of Atlanta. The non-nurse members of the Board elected were Mrs. John T. Fletcher, of Columbus, and Mrs. J. J. Egan, of Atlanta.

Mrs. Helen LaMalle, of New York, director of nursing service for the Metropolitan Life Insurance Company, was a special guest of the public health nurses, addressing them at a luncheon given in her honor on Friday at the General Forrest Hotel. Miss L. Carey Jones, Southern director of this service, was also an honor guest on this occasion. Miss Lillian Alexander, director of nursing service for the city of Atlanta, presided at this luncheon.

Round-Table Conferences

Several round-table conferences were held during the convention, aside from the general meetings, notably that of Administrators and Instructors, of Red Cross local committees, and others.

The American Red Cross held an interesting session Saturday morning, November 2nd, with Miss Ruth Mettinger, nursing field representative for Georgia, as the main speaker. Miss Jane Van De Vrede and Miss Lillian Alexander were other speakers on this program. Miss Lillian Cumbee, State Chairman, presided, and reports of local committees were given.

The Student Section of the G. S. N. A. also had an hour on Saturday morning when student papers and practical demonstrations were featured. Miss Feebeck presided.

1930 *Officers of the G. S. N. A.*

(Continued on Page 540)

BOOK REVIEWS AND ABSTRACTS

The Clinical Aspects of Venous Pressure, by J. A. E. Eyster, B.Sc., M.D., Professor of Physiology, University of Wisconsin, Associate Physician, Wisconsin General Hospital, Madison, Wisconsin. Macmillan Medical Monographs, George R. Minot, M.D., S.D., Editorial Adviser. 135 pp. Price $2.50.

Superlatives have no place in a scientific journal and, since this reviewer would not trust himself to write of this book without employing them, he must take refuge in quoting from its preface:

"Venous pressure is the most direct indication that can be obtained clinically of the extent to which the heart is moving its load of blood from the venous to the arterial side of the circulatory system, and it exhibits changes which precede the development of other signs and symptoms when the heart fails to do this to the normal degree. By far the greater part of the clinical situation in cardiac failure is due drectly to venous engorgement, exhibited as passive congestion in various organs and as exudates from serous membranes. As such engorgement occurs, the venous pressure rises, to fall again as the engorgement is reduced or disappears. . . . .

"Determination of venous pressure by the indirect method of vein compression is accurate, and can be readily and quickly carried out. . . . It is hoped that the present book, written primarily for clinicians, and to stress the clinical application of venous pressure, will stimulate an interest which can only make for a better recognition, understanding and treatment of cardiac decompensation. Since an understanding of normal conditions must precede the interpretation of abnormal states, a brief review and presentation of the present conception of the cause and significance of venous pressure is given, followed by a discussion of the altered state that exists in cardiac decompensation. The conception of this condition which is presented has come in many of its details only recently through a more thorough understanding of cardiodynamics, especially in relation to venous pressure. Following this, the method and its clinical applications are discussed." The book is illustrated with case histories.

We may not all rush to purchase an instrument to determine venous pressure, but most of us will understand better cardiac physiology and what happens when the pump is failing after studying this book. Even those who are thoroughly familiar with the growing literature on venous pressure, and especially the original publications of Eyster and his associates, will appreciate this summary.

This is the first of the Macmillan Medical Monographs it has been the good fortune of this reviewer to see. The paper, printing and binding all go to make the book a pleasure to handle. The caliber of the editorial adviser suggests that others of the series will be as well prepared by men of equal eminence. If they are anything like so well done, this reviewer hopes to read them all.

L. M. B.

Principles of Pathology for Practitioners and Students—By H. D'Arcy Power, M.D., Professor of Pathology, College of Physicians and Surgeons, San Francisco; Visiting Physician, San Francisco County Hospital; formerly Professor of Theory and Practice of Medicine, Williamette University; and William W. Hola, M. D., Assistant Professor of Pathology, Long Island Hospital, Brooklyn, New York; Director Pathological Department and Attending Physician, King's County, Corson C. Peck Memorial, and Caledonian Hospitals, Brooklyn, New York.

787 pages with 298 illustrations, many of them in colors. Publishers: D. Appleton and Company, 35 West 32nd Street, New York City.

This book is well written and conservative, presenting clearly and concisely, the recent advances in pathology from a physiological and chemical standpoint.

Cell heredity is treated in an interesting manner and reflects the wide clinical experience of the authors. The effects of stimulation and retardation, both endogenous and exogenous, on the individual cell, are discussed in detail. The authors viewpoint offers a new, fascinating and most reasonable explanation of pathological changes in general.

The book is to be specially commended for presenting in condensed form the facts concerning the common forms of pathology. Since it was written for students and busy practitioners, the omission of rare diseases and lack of the customary pages of bibliography seem amply justified.

GEORGE F. KLUGH, M. D.

Varicose Veins With Special Reference to the Injection Treatment—By H. O. McPheeters, M. D., F. A.C.S., Director of Varicose Vein and Ulcer Clinic, Minneapolis General Hospital; Attending Physician Asbury and Fairview Hospitals; Associate Staff of Northwestern Hospital, Minneapolis, Minn. F. A. Davis Company, Philadelphia, Publishers, 1929. Price $3.50.

A two hundred and eight page treatise on varicose veins, the first fifty pages of which are concerned with the embryology, etiology, diagnosis and characteristics of varicose veins. These pages are somewhat weak compared with the rest of the book for one has the feeling that everything could have been said in a much shorter space.

However, the remaining chapters on treatment are excellent, particularly those dealing with the injection treatment. The author has contributed many original observations and suggestions in these chapters which

are useful, and describes a technique which is both simple, practical for office use, and effective.

The final chapters on the treatment of ulcer cruris, complications of varices, and hemorrhoids are also well done. Having used this method for more than two years, I consider the book well written and a useful guide in the injection treatment of varicose veins.

J. C. MASSE, M. D.

"The Autonomic Nervous System"—By Albert Kuntz, Ph.D., M.D., Professor of Anatomy in St. Louis University School of Medicine. 576 pages, illustrated with 70 engravings. Lea and Febiger, Philadelphia, 1929. Price $7.00.

This book fills a definite need in medical literature, and should be of value to all physicians and surgeons. Knowledge concerning the autonomic nervous system is advancing rapidly. The first 372 pages contain a clear analysis of the anatomy and physiology of the autonomic nervous system, to which the author has contributed much from his own studies. Chapter five, on the embryology of the autonomic nervous system is particularly interesting, and the author has made valuable contributions in this subject. He has confirmed the origin of the ganglia of the sympathetic trunks from cells which migrate along the ventral nerve roots, contrary to the older opinion that they have a common origin with the dorsal root ganglia, from the neural crests. Similarly, the enteric, cardiac and pulmonary plexuses develop from cells which migrate along the vagus nerve path. In regard to the sympathetic innervation of skeletal muscles, evidence is cited to the effect that muscular dystrophies are due to disturbance of autonomic innervation; he states, however, that the evidence does not warrant the conclusion that all of the striated muscle fibres receive both sympathetic and cerebrospinal nerve fibres. Much of the autonomic nervous influence on skeletal muscle is expressed through its effect on muscle metabolism, in part through vasomotor control and in part through the direct effect on the muscle cells. Chapter 16 deals with the pathology of the autonomic system. Cellular changes in the sympathetic ganglia occur similarly to those in the central nervous system; it is extremely interesting, for instance, that such changes occur in poliomyelitis. They also occur in many toxic and infectious diseases. It is of interest to note that in arteriosclerosis, the ganglia exhibit excessive development of interstitial connective tissue and marked thickening of the adventitia of the arteries and veins. Many of the neuroses of the gastro-intestinal canal have their histopathological substratum in impairment of the autonomic nervous system. Chapter 17 is devoted to visceral sensitivity and referred pain, chapter 18 with the concept of vagotonia and sympathicotonia. Chapter 19 is devoted to the autonomic nervous system in disease, as in endocrine disorders, neuroses, influence on leucocytic distribution and permeability of blood vessels, immunity, etc. The final chapter deals with surgery of the sympathetic nervous system, with indications for periartieral sympathectomy, ganglionectomy and ramisectomy. An extensive bibliography is given at the end of the book. This is the best reference book available on all aspects of the autonomic nervous system.

WILLIAM A. SMITH, M. D.

ABSTRACT

STATE PEDIATRIC SOCIETIES

W. A. MULHERIN, Augusta, Ga. (*Journal A. M. A.*, Sept. 21, 1929), says that the section on Dieases of Children of the American Medical Association can no longer afford to be content with perfecting the pediatric knowledge of its members; it must measure to a fuller scope of usefulness by giving more consideration to the pediatric practice of the general practitioners. The ultimate goal of pediatric practice, and the reason that justifies specialization in this branch of medical practice, is the physical and mental well being of the infant and child. When it is considered that many more babies and children are treated in a preventive and curative way, by general practitioners than by pediatricians, it becomes quite apparent that pediatricians are not fully meeting their responsibilities. The activities of this section can justifiably be augmented, and the sphere of usefulness of the section can be quite advantageously extended. If the general practitioners throughout the country were given the benefit of these deliberations, not only through publications in THE JOURNAL but in a more direct way, a better grade of pediatric practice, generally, would prevail, a greater number of stronger and healthier babies and children would be reared, and infant and child morbidity and mortality would be still further reduced. It appears to Mulherin that this can be accomplished, and the excellent work of the section multiplied a hundredfold, by the simple procedure of organizing a state pediatric society in every state in the union.

BOOKS RECEIVED

Minor Surgery, by Frederick B. Christopher, M.D., Associate in Surgery at Northwestern University Medical School, Chicago. With a foreword by Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University Medical School. Contains 694 pages with 465 illustrations. Publishers: W. B. Saunders Company, West Washington Square, Philadelphia, Pennsylvania. Price $8.00.

Diseases of the Chest and the Principles of Physical Diagnosis (Fourth Edition), by George W. Norris, M.D., Professor of Clinical Medicine in the University of Pennsylvania, and Henry M. Landis, M.D., Professor of Clinical Medicine, University of Pennsylvania; Director of the Clinical and Sociological Departments of the Henry Phipps Institute of the University of Pennsylvania, with a chapter on the transmission of sounds through the chest, by Charles M. Montgomery, M.D., and a chapter on the electrocardiograph in heart disease, by Edward Krumbhaar, Ph.D., M.D. Contains

954 pages with 478 illustrations. Publishers: W. B. Saunders Company, Philadelphia, Pennsylvania. Price $10.00.

The Treatment of Diabetes Mellitus With Higher Carbohydrate Diets, by William David Sansum, M. S., M. D., F. A. C. P.; Percival Allen Gray, Ph. D.; Ruth Bowden, B. S. This book is a comprehensive discussion of the chemistry of diabetes mellitus, a presentation of the argument upon which Dr. Sansum's treatment is based, careful and detailed prescription for the proper use of insulin with clear and precise directions for the management of the diet. In addition there are many valuable recipes which all diabetics will appreciate. Contains 309 pages. Price, $2.50 net. Publishers: Harper and Brothers, 49 East 33rd Street, New York City.

The American Illustrated Medical Directory. A complete dictionary of the terms used in medicine, surgery, dentistry, pharmacy, chemistry, nursing, veterinary science, biology, medical biography, etc., with the pronunciation, derivation and definition. By W. A. Newman Dorland, A. M., M. D., F. A. C. S., Lieutenant-Colonel, M. R. C., U. S. Army, member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association; Editor of the American Pocket Medical Dictionary. This dictionary has received the most thorough revision of its long career. A large corps of associates has combed the literature of the last two years, with the result that several thousand of the newest terms have been added. The terms in anatomy, pathology, physiology, and physical therapy have received special attention. A definite standard in terminology, spelling, hyphenization, etc., have been established. The entire book has been re-edited by the editorial staff of the American Medical Association. Contains 1427 pages. Publishers: W. B. Saunders Company, West Washington Square, Philadelphia, Pennsylvania. Frank B. Neely, Representative, P. O. Box 864, Montgomery, Alabama. Price, $7.50 net.

The Autonomic Nervous System, by Albert Kuntz, Ph. D., M. D., Professor of Anatomy in St. Louis University School of Medicine. Contains 576 pages and illustrated with 70 engravings. Publishers: Lea & Febiger, South Washington Square, Philadelphia, Pennsylvania. Price, $7.00 net.

Clinical Medicine for Nurses, by Paul H. Ringer, A. B., M. D., formerly chief of the Medical Service of the Asheville Mission Hospital, Asheville, North Carolina; and on the staff of Biltmore Hospital, Biltmore, North Carolina. After five years a third edition of this book appears. Some changes have been necessary, but not as many as one might expect. After all, the fundamentals of symptoms, of diagnosis and of treatment remain largely the same, and in a book such as this conservatism is essential. Contains 330 pages, illustrated. Publishers: F. A. Davis Company, 1914 Cherry Street, Philadelphia, Pennsylvania. Price, $3.00 net.

Diseases of the Blood, by Paul W. Clough, M. D., one of the most difficult chapters in medicine is that which has to do with what are called the diseases of the blood. The nomenclature is confusing, the etiology generally obscure and the treatment all to frequently hopeless. The literature on the subject is inaccessible. With an ample discussion of the types of blood cells and their origins, Dr. Clough, discusses the anemias, leukemias and their related conditions. This is followed by an excellent chapter on blood transfusion and a section on methods of examination that contains all that is necessary for the practitioner. Contains 310 pages. Price, $2.50. Publishers: Harper and Brothers, 49 East 33rd Street, New York City.

NEWS ITEMS

The Eleventh District Medical Society met at Douglas on October 8th. The scientific program consisted of the following titles of papers: Some Impressions of French Clinics, by Dr. F. N. Aldrich, Brunswick; The Symptoms for which Tonsil Operations Should be Done, by Dr. B. H. Minchew, Waycross; The Prostate Gland as a Focus of Infection, by Dr. P. C. Quarterman, Valdosta; Diabetic Coma—A Medical Emergency, by Dr. Allen H. Bunce, Atlanta; Differential Diagnosis of Abdominal Conditions in Childhood, by Dr. J. B. Woodall, New Brocton, Alabama; Address by Dr. H. G. Huey, Homerville, President of the Society; Address by Dr. Wm. R. Dancy, Savannah, President of the Association.

Dr. J. W. Wallace, formerly of Thomasville and Commissioner of Health of Thomas County, has removed to Douglas and will serve as Commissioner of Health for Coffee County.

Dr. T. H. Johnson, formerly of Douglas, and Commissioner of Health for Coffee County, has been elected Commissioner of Health of Clarke County, with offices at Athens.

Dr. T. N. Roberts, formerly with the United States Public Health Service, has removed to Norcross and will occupy offices formerly used by Dr. Clements.

Announcement has been made that the Maltbie Chemical Company, of Newark, N. J., has contributed a grant for a research fellowship for the coming year to the Philadelphia College of Pharmacy and Science. The research work to be done under this fellowship will be fundamental in character and will cover a study of the toxicity, pharmacology and bactericidal efficiency of creosote, creosote compounds, and constituents of creosote. The work to be done under this fellowship follows the chemical researches on creosote of the past year under the Maltbie Chemical Fellowship at Princeton University.

The American College of Physicians will hold its fourteenth annual clinical session at Minneapolis, Minnesota, February 10, 11, 12, 13, 14, 1930.

Dr. Wm. F. Dobyns, formerly of Milledgeville, and a member of the staff of Georgia State Sanitarium, has been appointed a member of the staff of the United States Veterans' Hospital at Memphis, Tennessee.

Drs. Wallace L. Bazemore, Ernest Corn and Harry Moses, all of Macon, were elected to fellowships in the American College of Surgeons.

The Second District Medical Society met at the John D. Archbold Memorial Hospital, Thomasville, on October 12th. Dr. E. C. Smith, Donalsonville, read a paper on Treatment of Acute Lobar Pneumonia; Dr. L. W. Grove, Atlanta, Surgery of the Biliary Tract; Dr. Chas. H. Watt, Thomasville, Perinephritic Abscess; Dr. Henry E. Palmer, Tallahassee, Florida, Case Reports; Dr. Julian Yoeman, Jacksonville, Florida, Clinic on Cardiac Diseases; Addresses by Dr. William R. Dancy, Savannah, and Dr. G. Y. Moore, Cuthbert, President and President-Elect, respectively, of the Association. Next meeting of the society will be held at Albany.

The Spalding County Medical Society met at the Griffin Hospital, Griffin, on October 15th.

Dr. Francisco Maria Fernandez, Secretary of Sanitation of Havana, Cuba, attended the meeting of the Southern Medical Association, held at Miami, Florida, November 19, 20, 21, 22.

The Atlanta Neurological Society held its regular meeting at the Academy of Medicine, Atlanta, on Friday afternoon, October 25th. The scientific program was made up of papers entitled: Neurological Manifestations in Insulin Reactions, by Dr. H. M. Bowcock, Atlanta; Brain Tumor—Report of Two Cases, by Dr. Jos. A. McGarity, Atlanta.

The Tenth District Medical Society held its fall meeting at Milledgeville on October 24th. The following titles of papers were on the scientific program: Focal Infection, by Drs. W. R. Bedingfield, F. Lansing Lee, Asbury Hull, F. X. Mulherin, and L. P. Holmes, all of Augusta; Significance of Headache, by Dr. Allen H. Bunce, Atlanta; Spider Bite, by Dr. Irvine Phinizy, Augusta.

A meeting of the Southern Division of the American Nurses' Association was held at Birmingham on October 28, 29, 30. The Georgia State Nurses' Association met at Rome on October 31, November 1, 2.

The members of the Lowndes County Medical Society were entertained at dinner by Dr. Frank H. Thomas, Valdosta, at the Valdes Hotel on October 18th. Papers on live topics and of interest to the medical profession were read.

The board of trustees of the Georgia State Sanitarium, Milledgeville, met on October 17th. The following officers were elected: Dr. R. C. Swint, Superintendent; Dr. N. P. Walker, Clinical Director; Dr. L. P. Logino, First Assistant Physician; Dr. J. I. Garrard, Dr. Geo. L. Echols, Dr. D. T. Rankin, Dr. U. S. Bowen, Dr. C. G. Cox, Dr. R. W. Bradford, Dr. W. A. Bostwick and Dr. J. W. Mobley, Assistant Physicians; Dr.W. F. Dobyns, Junior Assistant Physician, all of Milledgeville.

Dr. Annie L. Sawyer announces the removal of her offices to the Biltmore Apartments, Atlanta.

Dr. Bomar A. Olds announces the opening of his offices at suite 312 Medical Arts Building, Atlanta. Practice limited to diseases of the ear, nose and throat.

Dr. Warren A. Coleman, Eastman, is building a modern brick veneer hospital and expects to equip it with all modern conveniences for the treatment and care of his patients. The institution will be open for the use of other physicians and their patients of Eastman and surrounding territory.

Drs. J. Cox Wall, B. W. Yawn, and I. J. Parkerson, Eastman, have leased a suitable building and are equipping it for use as a clinic and offices. The clinic will have modern equipment for diagnosis and treatment of diseases. It will be in charge of a competent nurse.

MARRIAGES

Dr. Charles Wesley Daniels, Atlanta, and Miss Georgene L. Terpering, New York, were married at the Church of Transfiguration, New York, on October 24, 1929.

OBITUARY

DR. EDWARD T. COLEMAN, Graymont, Member; University of Georgia Medical Department, Augusta, 1888; aged 66; died suddenly of apoplexy at his home on September 18, 1929. He has held many offices of trust tendered him by the citizens of his community and the medical profession. Dr. Coleman was noted for his interest in education, devotion to his profession and loyalty to friends. He served as chairman of the Board of Medical Examiners for the First District of Georgia during the World War. Dr. Coleman was president of the Medical Association of Georgia in 1920-1. Surviving him are his widow, two daughters, Mrs. Inez Sumner, of Graymont, and Mrs. Will Hosch, of Gainesville; two sons, E. T. Coleman, Jr., of Savannah, and Hugh Coleman, of Swainsboro. Interment was in the New Graymont cemetery.

DR. GEORGE M. RICKETSON, Broxton; Member; Southern Medical College, Atlanta, 1894; aged 62; died at his home after a long illness on September 22, 1929. His record from young manhood as a private citizen and as a physician was one of a great and good man. Dr. Ricketson consecrated his life to his work and people. Funeral services were conducted from the Baptist Church by Rev. J. E. Pate, assisted by several other ministers. Interment was in the Reedy Branch Cemetery.

Dr. Thos. D. Walker, Sr., Cochran; Louisville Medical College, Louisville, Kentucky, 1875; aged 84; died at his home after an illness of several months duration on September 28, 1929. He was prominent in the industrial and educational development of the state. Dr. Walker was well known in political, fraternal and religious circles. Surviving him are three daughters, Mrs. V. L. Adams, Mrs. Guy D. Jackson and Mrs. Lee Howard, all of Cochran; three sons, Dr. T. D. Walker, Jr., Asheville, N. C.; Jimmie Walker, Winston-Salem, N. C.; Walton Walker, Cochran.

Dr. Edward A. Russell, Fitzgerald; Member; Atlanta College of Physicians and Surgeons, 1906; aged 57; died at his home on October 18, 1929. He moved from Leesburg, Florida, to Fitzgerald in 1896. Dr. Russell was a prominent physician and had a wide circle of friends. He was a member of the First Baptist church. Surviving him are his widow, one son, Dr. Ralph E. Russell, Tampa, Florida. Funeral services were conducted from his home by Rev. J. F. Singleton and interment in Evergreen cemetery.

Dr. Oscar Smith Spivey, Macon; Member; University of Georgia Medical Department, Augusta, 1917; aged 36; died at his home of apoplexy on October 19, 1929. He served as lieutenant in the medical corps during the World War and as city physician of Macon during the term of Luther Williams as mayor. Dr. Spivey was a member of the Masonic lodge and the Methodist church. Surviving him are his widow and one son, Oscar Smith Spivey, Jr. Funeral services were conducted from the Mulberry Street Methodist church by Rev. C. R. Jenkins. Interment was in Riverside cemetery.

Dr. Spencer R. Stone, Atlanta; The General Medical College, Chicago, Illinois, 1891; aged 61; died at his home at 172 Westminster Drive on October 3, 1929. He had practiced medicine in Atlanta for nearly twenty years. Dr. Stone was formerly in medical work at Grand Rapids, Michigan, and in Rhineland, Wisconsin. He was a member of the First Presbyterian church. Surviving him are his widow and one brother, Dr. Eugene C. Stone, of Geneva, Ohio. Funeral services were conducted from the chapel of Awtry & Lowndes by Rev. J. Sprole Lyons. The body was shipped to Cincinnati, Ohio, for cremation.

Dr. Robert Walsingham Westmoreland, Atlanta; Atlanta School of Medicine, Atlanta, 1875; aged 80; died on October 11, 1929. He was a son of Dr. John Westmoreland, Atlanta, founder of the Atlanta School of Medicine. For a number of years Dr. Westmoreland was editor of the Atlanta Medical and Surgical Journal, also professor of anatomy of the Atlanta School of Medicine. Surviving him are two daughters, Mrs. J. L. deGive, of Atlanta, and Mrs. John Babbage, of Miami, Florida. Funeral services were conducted by Rev. L. O. Bricker from the chapel of Barclay & Brandon and interment in Oakland cemetery.

THE THIRTEENTH INTERNATIONAL PHYSIOLOGICAL CONGRESS

(Continued from Page 527)

neutralization, or acid production from food may cause anemia resembling the pernicious type.

Some experiments were reported by Yandell Henderson of Yale and four associates on the relief of atelectasis and pneumonia by breathing an atmosphere containing 5-7 per cent CO_2. Experiments were made on dogs who were infected by means of a bronchoscope with pneumonococci, type II. The collapsed and pneumonic areas of the lung cleared up to a large extent in a few hours, and many of the animals made a complete recovery.

Cramer of London gave a new histological method of obtaining direct evidence of functional activity of the adrenal gland. His method which is one of fixation in osmic acid vapor, showed the adrenalin in the medullary cells in the form of granules. These granules are seen to be expelled into the veins following activity. Exposure to cold, acts as a powerful stimulus to the adrenal medulla. Prolonged stimulation of the gland produces fever.

Dragstedt and Ellis of Chicago reported the effects of isolating the stomach by section at the cardia and pylorus, the duodenum being anastomosed to the lower end of the esophagus. Total loss of gastric secretion causes death in the dog in 5-8 days with weakness, loss of weight and profound depression. There occurs a decrease in the concentration of blood chloride, an increase in the CO_2 capacity, an increase in the pH and a terminal increase in non-protein and urea. The symptoms may be relieved by the intravenous injection of 2,000-3,000 c.c. of Ringer solution per 24 hours. In no case has life been prolonged over 76 days. The isolated stomach will secrete in 24 hours from 1,000-2,600 c.c. of gastric juice. The gastric mucosa secretes in 24 hours from two to three times the calculated amount of chloride ion in the circulating blood. They reported other

interesting phenomena observed in these animals.

Von Euler of Stockholm believes that he has found evidence that in fever there is an increase in the amount of adrenalin circulating in the blood. He points to the observation that it is not possible to develop fever after removal of the adrenals.

Garrey of Vanderbilt showed that the leucocytes count is markedly influenced by changes in circulatory activity. The basal count obtained after one hour of complete mental and physical relaxation is between 5,000 and 6,000. Severe muscular exercise, as a quarter-mile race, lasting less than a minute raises the count to 35,000. Acute stimulation of the skin as by a dash of ether, may raise the count to 8,000 or even 10,000, while pain may send the count to 20,000. Emotional disturbances will produce the same effect. Mild physiological leucocytosis shows a preponderance of polymorphonuclear cells, while high grade leucocytosis may show a preponderance of lymphocytes.

Raab of Vienna states that slow deep breathing decreases the systolic blood pressure of patients suffering from essential hypertension. He states that this does not occur in healthy persons. The effect is due to loss of CO_2. Inhalation of CO_2 increases the blood pressure of hypertonic patients on an average of three times the amount seen in normal individuals. The CO_2 tension of hypertonics is, however, not higher than normal. He believes that the nature of essential hypertension is a state of hyperexcitability of the vasmotor centers to the CO_2 tension of the blood, even in the degree of normal physiological tension.

Smith and Miller presented a study of the reflex influence of the colon on the stomach in order to serve as a basis for an explanation of the nausea, vomiting and epigastric pain often seen in chronic colitis. The experiments were done on dogs: an irritant, as croton oil or turpentine, was introduced into the proximal colon; or air was introduced, enough to cause moderate distention. These procedures were followed usually by a marked increase in the activity of the stomach. The peristaltic waves were more frequent, deeper and, sometimes, very violent. Reverse waves were also often noted. The reflex activity of the stomach was abolished by atropine.

A number of interesting demonstrations were given of recent experimental work and of new apparatus.

The chief address of the closing exercises was made by Professor Leon Fredericq of Liege "Reminiscences of the Early Days of the Physiological Congresses."

The Federation of American Societies for Experimental Biology under whose auspices the meeting was held and the committee on arrangements consisting of Dr. Walter B. Cannon, chairman; Dr. Alfred C. Redfield and Dr. Edwin J. Cohn, Secretaries, were thanked for the splendid organization to which was due the great success of the Congress. The Congress was also unanimous in its appreciation of the wonderful manner in which Harvard University entertained its guests.

The 1932 Congress will be held in Italy, either in Rome or Milan.

GEORGIA STATE NURSES' ASSOCIATION 23RD ANNUAL CONVENTION

(Continued from Page 534)

The closing session of the Georgia State Nurses' Association meeting came Saturday afternoon, when an election of officers for the ensuing year took place. In addition to Miss Masse as President, those elected to serve were Miss Alice F. Stewart, of Augusta, first Vice-President; Mrs. Mae M. Jones, Milledgeville, second Vice-President; Mrs. J. F. Hawthorne, Atlanta, Secretary; Miss Jane Van De Vrede, Treasurer; Miss Annie Bess Feebeck, Councillor.

Miss Massee, the newly-elected President, is well known to Southern nurses, having been active in nursing circles for many years. She is a graduate of the old Tabernacle Infirmary, Atlanta, is a Red Cross nurse, and has had experience in practically all types of nursing service, including private duty, institutional and government. At one time she was superintendent of nurses of a hospital in a nearby state; later she accepted service with the government and was stationed in a hospital on the Mexican border. During the World War period she served in hospitals in this country. At present she is instructress of nurses at the Patterson Hospital, Cuthbert, Ga.

The convention voted to hold the 24th annual meeting in Atlanta, in 1930.

The social features of the convention included a barbecue, tendered by the Floyd County Medical Society, a tea at the Coosa Country Club by the alumnae associations of the 7th District, an auto trip to the Mount Berry schools and to other points of interest around Rome, the annual banquet and a dance sponsored by the Rome Chamber of Commerce.

THE MODIFICATION OF POWDERED MILKS GOVERNED BY THE SAME RULES AS COW'S MILK

When physicians are confronted with undependable fresh milk supplies in feeding infants, it is well to consider the use of reliable powdered whole milks such as the well-known Mead brand. Such milk is safe, of standard composition and is easily reliquefied.

Under these conditions, Dextri-Maltose is the physician's carbohydrate of choice just as it is when fresh cow's milk is employed.

The best method to follow is first to restore the powdered milk in the proportion of one ounce of milk to seven ounces of water, and then to proceed building up the formula as usual.

VALUE OF SPEECH-READING

The soldiers in this vast army are men and women who day in and day out are doing the very best they can with a life which is devoid of the sense that is so essential for social contact with friend and family. A vast majority in this army are marching along discouraged and unhappy, but there are a few who are saying: "No matter what life has taken from me, I will 'carry on'; I will fight fair; I will make good this business of living. I will leave my place in the world better than I found it: It makes no difference if one of my senses has been destroyed—I will use my other four to their utmost."

These are the soldiers who have turned their handicap into an achievement. These are the soldiers who have mastered or are learning speech-reading. Speech-reading—that subtle art of understanding spoken language from the speaker's face—has given these soldiers a new lease of life; it has taught them to fight and made them want to "carry on."

And what soldiers they are! Making the very best of their lives and opportunities. Bravely they are going into the busines world. They are fighting a fight; they are "carrying on." Many of their dreams have been shattered. Many of their friends have failed them. Many times they are misunderstood and lonely—but they are "carrying on," and this is the kind of "carrying on" that counts.

This is the spirit that speech-reading puts into a man, and while there is no substitute on earth that is as good as the real thing, speech-making is the very best substitute for the ears. The eyes cooperate with the ears and help a man to make the very best of a difficulty.

Mrs. Saint Julien Cullum, Principal, Graduate Kinzie Institute of Speech-Reading, The Cullum School of Speech-Reading, Augusta.

PHARMACOPEIAL CONVENTION

The U. S. Pharmacopeial Convention—The Council on Pharmacy and Chemistry has issued a report calling attention to the call for the appointment of delegates to the United States Pharmacopeial Convention. The Council urges all the organizations which are entitled to delegates to select persons who are noted for high ideals, for breadth of vision, for sane understanding, and for sound judgment, as well as for technical knowledge, men who are fitted by temperament and training to collaborate, to help by deed and by counsel to keep the United States Pharmacopeia a work in which American medicine and American pharmacy may feel a just pride; a work that fairly reflects modern medical and pharmaceutic science; a work that is conservative of the best of the past, and progressive, constructive, sensitive to the best of the new. The Council discusses the character of the work of revision and the men required for this work. It points out that the selection of drugs to be admitted to the Pharmacopeia must be determined primarily by their therapeutic usefulness; that these are medical matters, and therefore fall within the technical province of the physicians of the revision committee; and that the definite recognition of this principle in the last revision contrbuted notably to its success and should be continued. The Pharmacopeia should be a working manual of the present era and not an antiquarian museum. New drugs should be admitted freely when their therapeutic usefulness appears established, and some old drugs which have fallen into neglect or disrepute should be omitted. The policies of the present revision have earned for the Pharmacopeia "the sanction of the medical community and for the public" and may safely be continued. (Jour. A.M.A., September 28, 1929, p. 989).

ISOLATION OF TAIL OF PANCREAS IN DIABETIC CHILD

The operation described by Geza de Takats and R. M. Wilder, Chicago (Journal A. M. A., Aug. 24, 1929), was designed to promote hypertrophy of the islet tissue of the pancreas and thereby increase the insulin output from the gland. This operation was performed on a child with severe diabetes with results that are encouraging.

POSITION WANTED

X-RAY and Laboratory Technician. Four years' experience. Qualified in all laboratory and x-ray technique, also, basal metabolism. G. H., Care Journal of the Medical Association of Georgia.

Established 1861

J. E. HANGER Incorporated

OF GEORGIA

Artificial Legs, Arms and Braces

Atlanta, Birmingham, New Orleans

Factories in principal centers

Atlanta Factory

100 West Peachtree Street

West Peachtree and Parker Sts.

EAGER & SIMPSON

SURGICAL CORSETS
ABDOMINAL SUPPORTS
UPLIFT BRASSIERES, ETC.

8 N. Forsyth St. Atlanta

Walnut 4972

Lac-Bismo

(HART)

See Description, Journal A.M.A. Volume XLVII, Page 1488.

A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water. Each fluidrachm contains 2½ grains of the combined salts in an extremely fine state of subdivision.

MEDICINAL PROPERTIES: Gastric Sedative, Antiseptic, Mild Astringent and Antacid.

INDICATIONS: In Gastro-Intestinal Diseases, Diarrhoea, Dysentery, Cholera-Infantum, etc. Also suitable for external use in cases of ulcers, etc.

E. J. HART & CO., Ltd.
Mfg. Chemists
New Orleans

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Par Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

AWTRY & LOWNDES
FUNERAL DIRECTORS
AMBULANCE SERVICE

No Starch

Listers

CASEIN-PALMNUT

Dietetic Flour

Starch-free Diabetic Foods that are appetizing are easily made in the patient's home from Listers Flour. It is self-rising. Ask for nearest depot or order direct.

LISTER BROS. Inc., 41 East 42nd St., NEW YORK

AMERICAN ILLUSTRATED DICTIONARY

2500 additional new terms.

100 additional illustrations.

1427 pages, with 525 illustrations.

Contains hundreds of new words to be found only in this book.

15th Edition—Price $7.00 net; with thumb index $7.50 net.

Send your order to

FRANK B. NEELY,

Representative

Box 864, Montgomery, Ala.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XXVIII | December, 1929 | No. 12

THE RELATIONSHIP BETWEEN PRE-MEDICAL EDUCATION AND MEDICAL EDUCATION*

STUART GRAVES, M. D.
University, Ala.

Twenty-seven years ago this honorary society of Alpha Omega Alpha was organized on August 25th by a group of students in the College of Physicians and Surgeons in Chicago. According to the history by one of its founders, who is now its secretary-treasurer, the movement sprang spontaneously and entirely from within the minds of a group of under-graduate students who reacted against what they considered to be some of the evils of medical education at that time. It was an extremely significant movement. During the quarter century of this society's growth there has developed a most extraordinary improvement in medical education in America, which also has sprung from within the ranks of the profession.

In a sense, Alpha Omega Alpha, which has come to be recognized internationally in medicine as Phi Beta Kappa is in academic education, stands as a symbol for all that is best in this progress, and so tonight those of you who are members of the Alpha of Georgia Chapter are not only to be heartily congratulated, but are to be reminded once more that your responsibility is great for the welfare of future generations of physicians who will one day take the torch from your hands. In an address given before the Western Reserve Chapter in 1922, our secretary said:

"Our influence is exerted not only in stimulating honest scholarship, ethical ideals and the research spirit in college, but also in laying stress upon suitable qualifications for entrance and graduation and upon better standards for the profession generally."

The constitution of Alpha Omega Alpha states that its definite mission is "to encourage high ideals of thought and action in schools of medicine and to promote the best in professional practice; also to encourage medical research." In most chapters especial attention has been paid to the history of medicine. This is well, for we should profit by the mistakes as well as the successes of those who have preceded us.

Since the history and objectives of Alpha Omega Alpha have been freshly brought to your minds, I am hoping that you will be interested in "The Relationship between Pre-Medical Education and Medical Education." This is a subject which has always seriously engaged the attention of those responsible for the advance of medical thought; particularly those of us who have come to be responsible in a measure for curricula and for the admission and promotion of medical students. A famous French psychologist in a recent inspiring book emphasizes the strengthening of the will by reflective meditation upon the past, the present and the future. It is well for us to review for a moment the history of medicine in this country, because we must face some facts. Doubtless you are familiar with it in a general way. Suffice it to say that, giving due credit for some of its good features and making due allowance for the newness of the country, American medical education was at a low level as compared with medical education in Europe when Mr. Abram Flexner's report to the Carnegie Foundation in 1910 turned the pitiless light of publicity upon prevailing conditions, and the American Medical Association and the Association of American Medical Colleges took up in earnest the task of improving conditions

*Annual Alpha Omega Alpha address, University of Georgia Medical Department, Augusta, Ga., June 1, 1929.

within their own organizations. In passing, it is right interesting to reflect that Alpha Omega Alpha was founded eight years before Mr. Flexner's report was made public. In nineteen short years since that report the number of medical schools has been decreased more than half and their standards have been elevated to such a level that the Federation of State Licensing Boards, which meets annually with the Congress on Medical Education in Chicago, unanimously voted this spring that they would in the future leave to the Class A medical schools, in so far as they legally could, the responsibility of passing upon the qualifications of a man to practice medicine. Truly, this puts upon the authorities in medical education particularly and upon the profession in general a tremendous responsibility in the relation of the profession to the public it so nobly and unselfishly serves, and it is a responsibility which I would impress upon the members of Alpha Omega Alpha, from whose ranks the future teachers and leaders of the profession will largely be recruited.

It is a far cry from the days of "The Alabama Student," immortalized in Osler's essay, when he went forth from the wild country of northern Alabama to supplement his medical education in Europe, even to the present time, when physicians flock from all parts of the world to this country to study in the great university schools and the great postgraduate institutions and some of the splendidly organized state boards of health. There is not time to trace all this development, but a few statistics tell the story. There have been in America altogether 447 medical schools. Today there survive only eighty, less than 18 per cent of that total. And of these 80, only 73 are now rated Class A by the American Medical Association. With all just tribute to the illustrious men who tonight in many of those old schools, who stood out as lights in the darkness among the men of their time, it can be safely assumed that every thinking physician rejoices that medical education has made such progress in this country that foreign governments all over the world are sending commissioners here to see how it is carried on at present, and that the stream of post-graduate students crossing the Atlantic has been largely reversed.

There are four great minds which have had much to do with this encouraging result, directly or indirectly, and it is upon the teachings of these minds, supplemented with some personal experiences and reflections, that this address is based. Those minds were the minds of Theodor Bilroth, the genius of German medical education, whom William H. Welch in this country rates as a half century ahead of his time and whose book, "The Medical Sciences in the German Universities," a half century ago laid down the foundation upon which our own structure today is being largely built. From the French we gain in Claude Barnard's "Experimental Medicine" a beacon light as a guide in stimulating and developing and applying scientific research in the medical field. As L. J. Henderson emphasized in his introduction that wonderful book, Barnard clearly established that the physiology of life, based on the physico-chemical properties inherent in the cell of animals and plants, and the physico-chemical properties of the environment of the cell, constituted "the predestined foundation of scientific medicine and the most important part of biology." And yet today some poor benighted students are urged by some physicians, and even by some pre-medical teachers, to undertake the study of modern medicine with that absolute minimum of physics and chemistry and biology, without which a standardizing association some thirty years ago said the most poorly prepared student could not under the law be admitted by the poorest medical school in this country and allow that school to retain its rating!

And then there is that greatest medical teacher and philosopher of modern times, Sir William Osler, whose great spirit kind fortune brought into this country at a fateful time. Born in Canada, he retired to his mother country to die, but the productive years of his life were with us and for nothing do we owe more gratitude to the British Empire of science and philosophy than for Osler.

A fourth great mind is still active, a product of the Southland. Although not a physi-

cian, he is of a family of physicians and he and his brother are still great leaders in American medicine. There may be some who have not always agreed with some of Mr. Flexner's ideas, but none can deny that the clearness of his thought and the thoroughness of his analysis of medical education here and abroad, the honesty of his motives and the fixity of his purpose will influence American medicine for good throughout this coming century.

In the light of the teachings of these masters, then, let us consider education in relation to medicine. No one can read their works or their lives without feeling keenly how great an advantage they had over their fellow physicians by reason of their broad and thorough education. Early in life they formed the habit of productive study. Osler, whose inner life is most intimately and most beautifully revealed in that splendid biography by his student and friend, Harvey Cushing, emphasized the habit of reading, taking notes and writing. Unknowingly he put into practice the fundamental law of psychology, a fixed habit. By constant and repeated effort it became easy for him to do what seems impossible to most men because they have not developed his habit of reading, of dissolving information, so to speak, from every extraneous source and then crystalizing this solution around the threads of their own fixed principles, into living and beautiful realities. Running like a golden thread through all of Osler's writings, even through his text book, are his constant historical references to all sorts of men and to all sorts of things in art, literature and science. His plan of work in this direction is revealed in his address on "The Earliest Printed Medical Books," in the introductory remark: "I have tried in the casual studies of a life devoted to hospital and consulting practice to glean two things, the book biographies of great men, and the influence of their books in promoting the progress of knowledge." Osler read omnivorously, made copious notes and wrote energetically from his earliest school days. His reading covered many subjects. His writing was original, but the influence of his dead as well as his living companions was great. His evenings were mostly spent browsing with the great masters, while his days were crowded with keen observations of everything about him. Very early in life, a boy in the wild country of Ontario, he became fascinated by the natural processes on every hand and his innate curiosity and his keen thinking led him directly into the study of biology. Fortunately his teachers were men of background and vision. From early days he was encouraged to travel, although he had little money. He sought the master minds of England, Germany, Austria and France. He had the sense to pick the great teachers and his memoranda are sprinkled with their names. From very earliest years he *made* leisure for original work. Osler's life is an epic of the great war, in which he lost his only son and his own life. He practiced the equanimity and imperturbability he preached. And up to the end of his temperament recalls Oliver Wendell Holmes' famous dictum: "To be seventy years young is sometimes more cheerful and hopeful than to be forty years old."

I have dwelt upon Osler's life because he is generally acknowledged to be the foremost teacher and medical philosopher of our remembrance and because his life can be so intimately studied in Cushing's biography. No person can read that book without being impressed with *the wonderful resourcefulness which a well organized and liberal education brings to a physician.*

Now, will you turn with me for a little while to that great French physiologist, Claude Barnard. Fortunately, for us, an illness forced him to the country which gave him birth and there he gave himself up to "reflective meditations" while nature healed his body. The result is a revelation of "the behavior of a man of genius," which is not often revealed. Barnard in his introduction points out that to embrace the medical problems as a whole experimental medicine must include three basic parts: physiology, pathology, therapeutics. Knowledge of the causes of the phenomena of life in the normal state, i. e., physiology, will teach us to maintain normal conditions of life and to conserve health. Knowledge of their diseases and of their determining causes, i. e., pathology, will

lead us, on the one hand, to prevent development of morbid conditions, and, on the other, to fight their results with medical agents, i. e., to cure the diseases (therapeutics). To conserve health and cure disease is the problem whose scientific solution medicine has confronted from the first. In the solution of this problem science has ever had to struggle with the powers of darkness, superstition, ignorance, prejudice, dogma, envy, selfishness. To banish these powers of darkness and to give science, in the light of an educated profession, the full opportunity to solve this greatest problem of mankind, as old as history, it is manifest that a liberal education is necessary. Barnard's "single aim" was always "to help make the well known principles of the experimental method pervade medical science." And to this end he pointed out clearly that investigation by observation of natural phenomena which are obvious and also phenomena which can be made obvious by experiment, followed with reasoning by induction and deduction, are essential. Observation may reveal little to most men as they walk through the fields of life, but observation by a man trained to recognize things about him will reveal a world of interesting activities all undreamed of by his unfortunate, ignorant fellow. Can one doubt that a young doctor properly trained by study and experience in chemistry, physics and biology, will fail to use his sight, his touch, his smell, his hearing, to their fullest capacity when he comes into the presence of a sick patient? Will there be danger of a learned man falling back upon mechanical tests or the laboratory aid of a technician if he has been educated to see, to feel, to smell, to hear, to investigate by trial and to conclude by reasoning? Will he not use those scientific methods with accuracy and common sense only as aides to his own natural senses? What a sophism is the criticism upon medical education that it is making modern doctors automatons and leading them away from the art of medicine! Does not such criticism rather spring from a lack of appreciation of the value of scientific procedure and betray a lack of modern knowledge which links the critic himself with those powers of darkness which are rapidly being conquered? One answer to these questions is presented by hundreds of keen young men today, who *voluntarily* are preparing themselves for the study of medicine to a far greater extent than is indicated by the "minimum" requirements published in the catalogs of most medical schools. If we accept Barnard's views, which are quite in accord with those of Billroth and Osler and Flexner and many others, then it must follow that the solution of the age-old problem of the conservation of health and the cure of disease for the benefit of mankind can be solved only by those physicians who are thoroughly trained to think and work accurately in terms of physiology and pathology and therapeutics, broadly speaking.

What studies should precede these sciences in order that they may be followed most successfully? Obviously phsiology is primarily an application of chemistry and physics to biology. And if one would study to advantage that comprehensive living science which Barnard says is the foundation of future medicine, should one attempt it on a bare smattering of eight hours of inorganic chemistry "of which qualitative chemistry may be a part" and "four hours of organic chemistry, of which two must be in laboratory?" Will not a young man with the right point of view and the right ambition seek to prepare himself better with eight hours of organic chemistry and a reasonable course of volumetric analysis and at least a minimum fundamental course of physical chemistry? And if physical chemistry is to be understood, does it not assume a working knowledge of mathematics through at least freshman algebra and trigonometry and a full year of physics? And if students take advantage of the newer anatomy, taught in connection with the living body, its origin, development and structure, will not some training in the structure and function of animal and plant life of lower levels be of help? In other words will not a study of comparative anatomy and embryology and parasitology and botany enable a medical student to grasp more easily and more effectively the natural structures and processes of the human body?

Let us turn from these natural sciences a moment now to consider the problem from

another angle. There is nothing which fosters ignorance so much as ignorance. How can we comprehend the wisdom and scientific accomplishment recorded in the history of human effort if we know nothing of human history or the languages of other people? Anyone who has made the slightest effort to study broadly has learned that English records only a comparatively small part of man's accomplishments; that about fifty per cent of the knowledge in other languages of natural sciences applied to medicine, to say nothing of philosophy and literature, is recorded in the language of that great nation which gave us Billroth and Virchow and Koch. And about 25 per cent is locked up in that language which Barnard and Pasteur loved. Who have been the great leaders in American medicine? Have they not been those men who studied in Germany and France as well as in America and England? One can call the roll of the great American teachers and practitioners, and almost every one gained information and inspiration in Germany and France.

Passing now from observation and experiment to inductive and deductive reasoning, can one believe that one can reason successfully without previous training in logic and philosophy? And if one is to apply his wisdom and reasoning to the art of practice among patients, is not an understanding knowledge of the workings of the human mind desirable? The real science of phychology, although suffering from the effusions of many "popular psychologists," so-called, is just coming into its own, and the day is not far distant when physicians will seek to prevent mental disorders as well as physical disorders. Then indeed will these great state universities obtain the money they need for education, not altogether on a per capita basis, as do some insane asylums, but in proportion to their value in promoting physical and mental health and social happiness among the people. And the Chambers of Commerce and Industrial Foundations will strive as hard to secure great institutions of learning and libraries and teaching hospitals as they do to secure foundries and factories and machine shops.

But let us return to our subject of education. Flexner states: "If medicine accepts as its goal, however remote that goal may be, scientific standards alike in research and practice, medical education must be conceived as primarily the effort to train students in the intellectual technique of inductive science." Again he states, "Latterly institutes have been founded in order to expedite research in the field of medicine, as in other fields. The research of such institutes does not relieve the university of its research function; for, if it be true that higher teaching cannot be efficiently prosecuted except in the atmosphere of scientific inquiry, then the existence of research institutes does not alter the educational situation. Nay more, even from the standpoint of scientific progress, the medical faculty does not shrink in importance; for the facilities of the university are too expensive to be often duplicated in institutes devoted solely to research, and the university possesses in the variety and extent of its collateral facilities resources which research institutes, being specific in purpose, are not likely to possess. The medical faculty continues, then, to be charged with responsibility to advance, as well as to disseminate and apply medical science. Has the institute for medical research any definite educational function? The founders of institutes for research were assuredly thinking of investigation, not education. A brief survey of the evolution will, however, show that in these days research can no more be divorced from medical education than can medical education be divorced from research."

If this last statement is true—and nearly every single educated man will agree it is—then it is not out of place in a discussion of the relationship between pre-medical education and medical education to inquire where our teachers and instructors are coming from, if those young men and women who are going to try to study medicine are not urged to qualify themselves in the fundamentals which lead to medical studies. As Governor Graves, of Alabama, said in an inspiring address last Tuesday to the graduates of the University of Alabama, "You must know the fundamentals if you are going to play the

game successfully." Governor Graves is an educated man and an old football player. He knows: and he has done more for education in Alabama than any other governor in that state's history, so President Denny says, and he ought to know. We "must know the fundamentals" if we are to study and practice medicine: Latin, English and German or French; mathematics and drawing; biology, chemistry, physics, even geography and geology and astronomy; history, philosophy, sociology, logic and psychology; even a little ethics would do no harm.

A physician should be a leader in his community. To be a leader he must be an educated man. As never before in history, the doctor must understand the social relationship of man to man, the psychology which governs society, the history of human endeavor, the literature which contains scientific records, the natural sciences which lead to the great complex science of modern medicine, with its emphasis upon preventive medicine and public health. There is no longer the so-called "practical doctor" as distinguished from the "scientific doctor." That doctor is most practical who applies science with common sense and a sympathetic understanding. The "art of medicine" is cultivated by application of science without neglect of the natural senses whose keen development characterized the best of the old physicians. But they were like a blind man whose sense of touch becomes extraordinarily sensitive, or the dumb man whose hearing becomes extraordinarily acute. Modern medical science gives us such greatly increased artificial aids that there is sometimes danger of neglecting the development of one's natural senses; and yet the educated physician of today, who is wise enough to prepare himself to utilize both, has a tremendous advantage over the best of the physicians of yesterday.

Modern medical education cannot be imparted to everyone; it can be imparted to the best advantage only to persons of good character, fixed purpose, good native intelligence, trained to serious application. The maturity, previous training and intellectual competency of the student body determine in advance in large measure the scope, quality, method, aims and outcome of instruction given by the medical faculty.

Recently I made a study and tabulation of the admission requirements of all Class A medical schools in the United States. It may surprise you to know that the minimum association requirements of sixty hours for entrance, fixed years ago, are not equal today to the admission requirements of the following medical schools: Alabama, Southern California, Stanford, Colorado, Yale, Georgetown, Howard, Chicago (Rush), Illinois, Northwestern, Loyola, Indiana, Iowa, Kansas, Tulane, Hopkins, Harvard, Michigan, Minnesota, Mississippi, Missouri, Washington University, Nebraska, Dartsmouth, Albany, Bellevue, Buffalo, Columbia, Cornell, Long Island, Rochester, Syracuse, North Carolina, Wake Forest, North Dakota, Cincinnati, Western Reserve, Oregon, Pennsylvania, Pittsburg, Temple, Womans College of Pennsylvania, South Dakota, Vanderbilt, Texas, Utah, Vermont, Virginia, Wisconsin, Marquette.

Moreover, even these medical schools which still carry the minimum association requirements in their catalogues, in practice give preference very naturally to those among the excessive applicants who are prepared best, due consideration being given to such qualities as character, native intelligence, strength of purpose and general resourcefulness. To encourage even indirectly any pre-medical student to be satisfied with sixty hours of premedical preparation, in the light of these facts, is to be either careless of the student's welfare or uninformed as to his future needs.

In closing, let me make a plea for quality of preparation, as well as for reasonable quality. I am not unaware of the struggle which many young men must make for an education. Neither am I at all sympathetic to the fallacious argument that some medical schools must keep their standards low in order to grind out doctors for the rural communities. It is our business to protect the rural communities from the kind of doctors which schools with those ideals would foist upon people who need protection. Moreover, one needs only to read the papers of Pusey, Pearl, McLean and others in the Proceedings of the

Annual Congress on Medical Education for 1924, to be converted completely to the fallacy of such arguments.

I wish you all could have heard the wonderful address which President Suzzalo, of the Carnegie Corporation, made before the Alumni dinner in Alabama Monday night. The Governor of Alabama heard it and he is going to have it printed and spread broadcast among teachers and pupils of all the schools of Alabama. Dr. Suzzalo analyzed the English, German and American systems of education. He pointed out how the English were recruiting their governing classes democratically, providing a ladder which was high but narrow, whereas America was accomplishing the same end by providing a ladder which was at once high and broad, and furnished an opportunity for every American boy and every American girl. There are more students in college today, five times over, than there were in high school twenty years ago. America is entered upon the greatest experiment in all history—the experiment of educating every man and woman and child to govern themselves.

Any boy who pleads poverty as an excuse for lack of a thorough education is lacking in those qualities of courage, wisdom and intelligence which a doctor needs. More money, it is said, is spent in this country now on worn out Fords, chewing gum, cheap moving pictures, cheap magazines and cosmetics than on colleges and universities.

In the beginning of the movement to place medical education upon a higher level the standardizing associations fixed certain standards for Class A schools. Among these was one that they should require for admission at least sixty semester hours in all approved colleges, including at least twelve hours in chemistry, eight each in biology and physics and six in English. It is strange indeed that this minimum legal threshold, fixed years ago as the low limit beneath which the poorest student could not lawfully be admitted to the poorest school in the country should persist today in more than half the college catalogues as the recommended course for premedical education! What more natural than that many pre-medical students should believe that only such preparation is necessary! What less surprising than that many fathers and mothers, to say nothing of their sons and daughters, should feel aggrieved if, armed with credentials for sixty hours obtained in some way, no matter what the quality of their record, such applicants cannot walk into a medical school as they would walk into a cigar store to claim a premium in exchange for collected coupons.

I want to make here a plea for *quality* of preparation. The first man matriculated this spring for the freshman medical class in Alabama next fall was one of ten children of a white haired Alabama country practitioner. This young man will have at the end of this year only seventy semester hours credit which will qualify him for the B. S. in Medicine degree after two years of medicine. But the *quality* of his scholarship was good and he had those other characteristics just mentioned which has made his father such a fine type of country practitioner. All these qualifications made this young man more desirable in our judgment than a man with a Master's degree whom we declined that week because he lacked those personal qualities and because his 150 semester hours were sprinkled with D's, E's and F's. On the whole, however, *quality plus quantity* offers greater chances of success. You all are familiar with the statistics in many professions these days, as well as in business, which seem to prove that success is directly proportionate to high scholarship. The recent two years study made by the personnel department of the American Bell Telephone Company is a striking illustration of this fact.

There are no longer—or should be no longer—any definite breaks between high school and college, between college and medical school, between pre-medical and clinical years, between medical school and hospital internship, or between these and practice. Rather should a modern medical education be a gradual and systematic progress through high school, college, medical school, and hospital into a life of continued study and experiment, possibly in specialized fields.

We should begin the study of science in the light of the teachings of Barnard and Bill-

roth and Flexner and Osler and continue them through school, college, medical school, hospital and life. And when the end comes may we feel with Osler that "to have striven, to have made an effort, to have been true to certain ideals—this alone is worth the struggle." And if through it all we sweeten our efforts with human sympathy and charity, then indeed may we hope, each in his humble way, to lie down as to pleasant dreams and envision perhaps a renewed opportunity to sit at the feet of the masters of the ages.

THE MATERNITY HYGIENE PROGRAM OF SAVANNAH AND CHATHAM COUNTY

DANIEL L. SECKINGER,* M. D.
Savannah

In its broadest sense, prenatal care may be defined as such supervision of the pregnant woman as will enable her to go through pregnancy safely, to bring forth a normal living child with minimum danger and be discharged in good physical condition.

The necessity for such a program has been before the American public for a number of years, largely through such agencies as the Child Hygiene Bureau, the United States Children's Bureau, and the Child Hygiene Division of the New York City Health Department. Very substantial progress has been made within the past twenty years in decreasing infant mortality and raising the average span of life. A better understanding of children's diseases on the part of the physician, the work of the pediatrician and the extension of public health nursing, along with such public health measures as the control of communicable disease, milk supplies, and the supervision of midwives, have, and should continue to play, an important role in bringing about a decrease in maternal and infant mortality.

Within the past ten years the most important single contribution to the maternal and infant hygiene program has been the establishment of Divisions of Maternal and Infant Hygiene for charity and midwife patients as integral parts of health department organizations. The establishment and maintenance of such organizations are of vital importance, not only to the physician, the health officer and the public health worker, but also to the state and nation at large. The statistician, various societies and organizations, not excluding the alarmist, have shown from time to time that our birth rate suffers a gradual yearly decline in certain localities, which, no doubt, is dependant upon the social and economic status of certain groups of society.

While the number of births still exceed the number of deaths in our community, inasmuch as there are 110 live births for every 100 deaths, yet if we consider figures for the white and colored races separately, we are confronted with the fact that the colored race in Savannah is slowly dying out and would become extinct, if it were not for an influx of colored people from outside communities. The birth rate for the white race in Savannah for the past five years has been 181 live births per 100 deaths, while in the colored race there have been only 71 colored live births per 100 deaths; in other words, for every two live colored infants born, there are three deaths. Figures from the registration area in the Continental United States give for the colored race 144 live births per 100 deaths. Confronted with a yearly decline in the birth rate among the colored race, which is characteristic of urban negroes everywhere in congested districts, the Savannah Health Department brought the midwives under control in accordance with the Georgia law governing midwives in 1922, and later established a prenatal clinic for colored women in 1925, as a result of which we hope the pendulum will swing eventually from a decrease to an increase of live births over deaths.

Most gratifying results were obtained after the city midwives were placed under supervision. In 1920, twenty-six colored and two white infants died of tetanus neonatorium. In 1921, twenty-six colored and one white infant succumbed to the same disease. In 1922, when the midwives were placed under supervision, deaths from tetanus of the

*Director Prenatal Clinic, Health Department, Savannah and Chatham County.

cord fell rapidly and since the summer of 1922 only three deaths have been recorded. Tetanus neonatorium has been practically obliterated from the community and while many infants have been saved, still, when we consider the fact that for the past five years there have been 10 deaths for 7 live births in the colored race it is evident that problems are concerned far beyond the education of midwives in the care of the mother and child. We think the colored prenatal clinic will offer the solution to our declining birth rate.

A prenatal clinic properly run requires, in addition to a regularly attending physician, trained in obstetrics, an adequate corps of well trained public health nurses for clinic and field work, provision for urinalyses and Wassermann tests, a well equipped examination room and ample hospital facilities.

At present there are two prenatal clinics in Savannah, one for white women, sponsored by the Junior League of the City, and the other for colored women, under the health department. Data for this paper was gathered from the colored clinic, because three-fourths of the colored prenatal patients of Chatham County and Savannah attend this clinic at the present time. Furthermore, most of the colored cases are midwife patients, and in accordance with the Georgia Law governing midwives it is necessary that these patients be examined by a physician. The maternity hygiene program for Savannah and Chatham County has been in operation since May, 1927, at which time the city and county joined their health activities under the Ellis Health Law. The number of our patients increased three fold during the first year. Six hundred and eleven prenatal patients visited the clinic during that year and seven hundred and eighty-eight during the past year, which totals more than two-thirds of the number of births for the city and county. At present three out of every four pregnant colored women are patients at our clinc. Of a total of 1,388 patients examined at the clinic within the past two years, all have had the benefit of a thorough physical examination, which includes urinalysis, blood Wassermann test, examination of the heart, lungs, abdominal palpation, pelvic mensuration, vaginal examination, and blood pressure readings. We require that patients visit the clinic monthly until the 7th month and twice a month after that time. Urinalyses and blood pressure readings are always taken at each return visit. During the past year 3,013 visits were made to the clinic.

I consider the manner in which patients are prepared for examination of paramount importance. Our patients come to the examining room dressed in appropriate examining gowns, which are given them upon their arrival at the clinic. Not all patients require a complete physical and obstetrical examination at their return visits, but they should be so attired when they enter the examining room that any examination thought advisable by the examiner, based on the condition of the patient, might be conducted without friction or delay. It might be interesting now to outline some disease conditions which were found at the clinic, and give some figures, as a result of which we believe our maternity hygiene program justifies itself and offers a means by which a thinning portion of our population will be replenished.

Cardiac Disease

No deaths due to cardiac disease are recorded among our clinic patients for the past two years, although fifteen patients showed signs of cardiac disease to such extent that it was thought unsafe for midwives to conduct their labors. Inasmuch as none of these cases showed signs of decompensation, it was not necessary to resort to the induction of labor.

Pulmonary Tuberculosis

Twelve cases are listed under pulmonary tuberculosis, varying in degree from latent or arrested types to fulminating conditions. One fatality is recorded as a result of a fulminating tuberculosis. In this instance a colored girl of 18 years, five months pregnant, was admitted to the clinic with marked dyspnea and signs of prostration. Examination revealed extensive involvement of both lungs. she was sent to the hospital, but owing to her condition, it was thought inadvisable to resort to the induction of labor, and she died a few days later without operative interference.

Pulvimetry

At their first visit to the clinic, all patients, multipara and primipara, are examined vaginally and their pelves measured. While there are undoubtedly fewer cases of contracted pelves in this community than in more congested districts where rickets is more prevalent, we believe that careful pelvic mensuration should be practiced in all cases. We do not permit our midwives to conduct labors in cases where the conjugata diagnonalis measures less than 11 cm., 12:5 cm and above being considered normal pelves. Among our patients, 18 showed contracted pelves of varying degree, 6 to such extent that we felt it unsafe for midwives to deliver them. Two Caesarean sections were performed because of pelvic dystocia, one after the patient had been given a trial of labor without success and the other in a multipara with a history of two previous stillbirths because of pelvic dystocia. The latter patient, a colored woman of 21, of the dwarf type, came to the clinic at the fifth month of pregnancy. Her pelves were found to be of the generally contracted rachitic type with a diagonal conjugate of 8 3-4 cm., and a false promonotory of the sacrum: a normal delivery at term was out of the question and a Caesarean section at elected time was indicated. About the eighth month she developed albuminuria two plus, headaches, edema of the extremities, but without rise of blood pressure. Inasmuch as patients with toxemia are poor operative risks, it was thought best to operate before advanced symptoms appeared. The operation was performed and a viable child obtained. The convalescence of the mother was uneventful.

The Toxemias of Pregnancy

Seventy-eight patients showed a rise of blood pressure ranging from 150 to 210 systolic with or without albuminuria and the classical symptoms of toxemia, such as headache, dizziness, edema of the extremities and nocturia. One fatality occurred in this group in a woman who refused to go to the hospital for treatment. In these cases unqestionably good results are ordinarily obtained through the regulation of the patients' diet and elimination.

Syphilis

The dictum of the immortal Osler that. if one knew all about syphilis, one would know all about medicine, holds good in the field of obstetrics as well as in other branches of medicine, for syphilis is by far the most important single cause of stillbirths and plays an important role in the mortality of infants. Researches upon the ravages of syphilis in pregnant women were initiated by Dr. J. Whitridge Williams, of the Woman's Clinic, John Hopkins Hospital, in 1916. He showed that 12 per cent of the early deaths of white babies was due to syphilis, while comparative figures for the colored race averaged 45 per cent of deaths due to syphilis. He was the first physician to administer antiluetic treatment to prenatal patients, and as a result showed that, when antiluetic treatment is administered early in pregnancy, only seven per cent of mothers so treated deliver stillbirths or babies that die within two weeks after delivery, whereas, if syphilitic patients go untreated, fifty-two per cent will be either stillborn or die within two weeks.

We have known for a long time that syphilis is prevalent among our colored people. Of the 1,388 expectant mothers who came to our clinic, 225, or 37 per cent the first year, and 268, or 34 per cent the second year had syphilis as shown by the Wassermann test. Of the 493 patients with positive Wassermanns, 348 received a course of antiluetic treatment, which at present consists of six doses of intravenous neosalvarsan. When we apply the figures of Dr. Williams that 25 per cent of the syphilitic mothers in the series of cases studied by him delivered stillborn babies or those that died within two weeks by analogy is evident that we should be saving at least from 50 to 75 babies a year due to antiluetic treatment alone. What is our actual saving of human lives based on figures gathered from our clinics as regards stillbirths?

In order to answer this question, for the sake of convenience our patients have been divided into three groups: Those who received the full course of treatment before delivery, those who received part treatment, and those who received no treatment. Of the 493

patients with positive Wassermanns, 348 or 71 per cent had the full course of antiluetic treatment before delivery, 68 or 14 per cent part treatment, and 49 or 10 per cent received no treatment. The patients listed in the last two groups are those who came to the clinic too late for the full course of treatment or those who, upon the follow up visit of the public health nurse or other representative from the Health Department, were found to have moved away or were physically unable to attend the clinic. In very few instances have we encountered any unwillingness on the part of patients to receive treatment. Among our group of patients 16 were found to be not pregnant upon their first or subsequent visits to the clinic.

In order to make a further study of the incidence of stillbirths and the effect of adequate treatment among the patients with positive Wassermanns, a list of stillbirths was obtained from the Department of Vital Statistics at the Health Department and checked against the clinical histories of our patients. It was found that, of the 49 patients with positive Wassermanns who had had no treatment, 15 or 31 per cent delivered stillbirths; of 68 patients who had part treatment, 6 or 9 per cent delivered stillbirths, and of the 348 patients who received full treatment, 3 or 4 per cent delivered stillbirths. According to the figures above, the stillbirth rate per 1,000 syphilitic mothers with adequate treatment is found to be 40, whereas among those with no treatment the rate is 265 per 1,000, or a difference of 225 stillbirths. In other words, when the full course of treatment is administered, according to our figures, 225 babies are saved at birth among every 1,000 mothers with positive Wassermanns. What other public health measure is fraught with so great a possibility of saving human lives? The recent decrease in the number of stillbirths registered at the Health Department we also believe has a significance which may be traced to the influence of the clinic. For the five year period beginning 1922 and ending 1927, an average of 150 colored stillbirths were recorded per year with little variation per year. From May, 1927, the time when the present maternity hygiene program began, to May, 1928, stillbirths dropped to 118, and over a similar period during the past year only 101 colored stillbirths were recorded.

It is a well known fact that syphilis also plays an important role in the causation of early infant mortality. While complete data is not available at present covering this early period among our patients, studies have been initiated as a basis of a later report. As stated above, Dr. Williams found an incidence of 52 per cent stillbirths and infant deaths, under two weeks, among his patients who received no treatment, and while our clinical material has not been thoroughly reviewed, reports from the Department of Vital Statistics indicate that there has been a substantial reduction in the death of infants under one week and one month. For a five year period before our program was begun the average number per year of infants who died under one week was 53; under one month, 16, and under one year, 61. After adequate prenatal control was initiated the number of deaths under one week fell to 38; under one month, 7, and under one year, 58. Reports from the country at large seem to indicate that there is little diminution of infant deaths under one week and one month. According to our figures, it is in these two groups that our greatest reduction is found, and we believe adequate prenatal control is marking the advance in the prevention of early infant deaths.

In conclusion, I wish briefly to quote opinions of others whose achievements place them in position to speak authoritatively on the value of prenatal clinics to the community.

Dr. J. W. Williams, of the Johns Hopkins Hospital, speaking before the State Medical Society of New York in 1920, said: "I think it may be safely said that the propaganda for the development and extension of prenatal care, which has been conducted for the past few years in the country, constitute one of the most important advances in practical obstetrics, as it has taught us to appreciate the unnecessary wastage of foetal life which has occurred in the past and to consider how it may be diminished."

An abstract from the report of the Committee to Report on the Status of Maternal

and Infant Mortality, presented at a joint session of the Child Hygiene and Public Health Nursing Sections of the American Public Health Association, at Chicago, October 16, 1928, concludes:

"There has been practically no reduction in infant mortality under 1 day since 1918. As a matter of fact, statistically there has been a slight rise. When we take the mortality under 1 month for the same period, we find a percentage fall of 1.6, which is a very slight decrease. The reduction in the infant mortality under 1 year has really accurred in the period between 1 month and 12 months, a percentage fall per year of 5.7. It is clearly evident that if we are going to reduce further infant mortality, we must reach the causes that are effective in the first 24 hours.—I believe those who feel responsible for infant life must deal with the prenatal and obstetrical problem."

Dr. Shirley W. Wynne, Health Commissioner of New York says: "Statistics show that about 8 per cent of pregnant women attending prenatal clinics have syphilis. If no treatment is given, one-half of these pregnancies end in dead births or abortions, and probably one-half those born alive die within their first year. The remainder join the ranks of congenital syphilitics in the community, defective, miserable children, who constitute the great tragedy of syphilis. Surely no health problem offers such an opportunity and such a challenge to public health workers and the medical profession. The means of preventing syphilis are at hand; what is required is application of medical methods tested and proved."

VALUE OF LIVER AND IRON IN TREATMENT OF SECONDARY ANEMIA

Chaster S. Keefer and C. S. Yang, Pieping, China (Journal A. M. A., Aug. 24, 1929), have been interested in the response of various secondary anemias to treatment with liver and iron. They present the results of a study of thirty-seven patients with secondary anemia due to various causes. Nine recovered spontaneously; eight recovered following blood transfusion; ten were treated with iron alone, and the remaining ten were treated with iron and liver. They believe that liver and iron in combination is more effective than either given alone. This was particularly noticeable in the anemia associated with hookworm infestation.

ACUTE INTESTINAL OBSTRUCTION*

W. J. CRANSTON, M.D.

Augusta

Some time ago, my esteemed collegue, Dr. C. W. Crane, in discussing the subject of acute intestinal obstruction before this body, conceived the thought, and gave birth to the epigrammatic expression, "The longer time they live before an operation, the shorter time they live after." In this opinion, the essayist entirely concurs. Hence, there would seem to be no place on a programme of acute intestinal obstruction for the internest, were it not for the fact that it is the internest or general practioner, who sees these cases, and prescribes castor oil, or some other drastic purge, before he calls in his surgical consultant. As some one has aptly said, the giving of purgatives in acute obstruction compounds the felony of delay. If this be true, and I believe it to be true, then it is difficult to escape the conclusion that the extremely high mortality in this deadly malady must be laid at the door of this group, with the exception of the post operative cases, for which, obviously the surgeon must be held accountable. If recognized early and proper surgical measures are instituted, the mortality will be impressively reduced.

Sir Henry Gray, in discussing the subject in Lancet, January, 1927, insists that all cases are urgent, though some are more so than others. That age and degree of robustness of the patient are important factors, a study of statistics will abundantly prove, for here we find that the greatest toll is exacted at the two extremes of life, and among those unfortunates whose vitality has already been lowered by some pre-existing malady. They do not seem to be able to withstand the shock nor pain so well as those in the middle span of life, or who have previously enjoyed robust health. While the pain may not be so harrowing in some cases, procrastination is equally fatal, since in these cases toxemia may be even more deadly than shock.

*Read before the Tenth District Medical Society.

Moynihan says that of any twenty consecutive cases of average intensity, fifteen will have been too long deferred. Few surgeons in a series of twenty or more cases, can show a lower mortality than fifty per cent. Anything over ten per cent is the mortality of delay.

I repeat then. For the extremely high mortality in acute intestinal obstruction, the internest and general practioner are responsible.

I am inclined to think that much of the fatal delay may be traced to the text books to which we refer our students. Here, the description is generally that of a full blown obstruction that has gone past the safety zone and has entered upon that period which contributes so heavily to the high death rate. That this should be true, is not difficult to understand. That it is true, cannot be too strongly condemned. If we hark back only a few decades, we will recall the time when an operation for obstruction was invoked only as a last resort. That the mortality was staggering was to be expected. It was a desperate chance taken by a courageous surgeon, with the cards stacked against him. He generally lost, but he kept on fighting, hoping that the next case would be benefited by that which he had learned from the last. Little by little, year by year, these pioneers contributed to a steadily growing fund of information. These contributions though, seem to have been confined largely to the journals. Even so scholarly a publication as the "Oxford Medicine" leaves one very much under the impression that the classical picture of acute intestinal obstruction is that of extreme distention, great prostration and feculent vomiting. Just so long as we permit our young men to go away from our colleges with this erronneous idea, just so long may we expect our needlessly high mortality in intestinal obstruction to continue.

I shall not consume your valuable time by enumerating the many causes of acute obstruction, but it may not be amiss to recall some of the more common ones. This condition may be discussed under two heads, namely, that due to mechanical interferences and that due to functional disturbance.

Under mechanical interference, within the lumen of the intestine may be mentioned gallstones, coproliths, swallowed objects, intestinal parasites, and from without the lumen of the bowel, tumors pressing on the gut, especially in the presence of adhesions, adhesions acting alone, the gravid uterus in fixed retrodisplacement, inflammatory diverticula, hernia, volvulus and intussusception. Under functional disturbances, I would especially mention mesentery embolus or thrombosis, shock from severe blows or operation, and reflexly, from peritonitis.

When the obstruction is solely mechanical and this can be promptly relieved by operation before damage has been done to the blood or nerve supply, the prognosis is not worse than for many other major operations, and herein lies the crux of the argument against the slothful.

The effect on the bowel varies with the cause. Slight constriction or kinking, may at first prevent the passage of the intestinal contents. Later, the increased pressure of the contents of the bowel, with congestion due to the thin walled veins being more readily occluded than the arteries, brings about the same condition as the more serious strangulation, whether by bands, volvulus or intussusception.

The degree of interference with the circulation of the bowel, mucous membrance, lymphaties and walls of the bowel as a whole, influences the rapidity and severity with which the symptoms appear. A snare formed by a band thrown over, or around a bowel, may strangulate at once and gangrene occur. On the other hand, it may occlude only the veins, causing congestion and distention, then tightening of the snare will involve all the bowel. The ultimate result is the same, embolism or thrombosis of the mesentery vessels.

The mechanical obstruction is bad enough and unless relieved will prove fatal, but the majority of cases can stand a reasonable amount of blocking and still recover, provided the blood supply to the bowel is not obstructed. When this develops, gangrene is inevitable, and since the distribution of the blood vessels and nerves from the parasym-

pathetic system is so closely akin, we get not only thrombosis and gangrene, but also paralysis.

I quote Brockman, Lancet Vol. 114, page 234.

"The accumulation of the pent up intestinal contents, together with a rapidly increasing growth of virulent organisms, causes a degenerative change in the musculature of the gut-wall, which, together with a stagnation of the blood supply, culminates in a paralysis and absolute loss of tone." He might have gone a bit further, and said that not only was there a rapidly increasing growth of virulent organisms, but more deadly still, proteose poisoning from the ingested proteins.

Apart from the mechanical is the toxic aspect of the clinical picture. Bacterial decomposition and imperfect metabolism of proteins (proteoses) are responsible for the toxemia. The proteoses may be excreted, or exuded directly, into the bowel through the mucous membranes. They are very dangerous and rapid in their action, and are mostly seen in high obstruction, where bacterial decomposition is at a minimum. So true is this, that the jejunum has been called the poisonous proteose level in obstruction. Toxemia, prostration and shock come on early when the obstruction is high.

Dehydration is always present and severe and offers a serious menace, but one that can be successfully combatted.

While vomiting is generally an early manifestation, it may come on late, whether due either to toxic or mechanical causes. We are prone to accept feculent vomiting as a positive sign of obstruction. It is, but infinitely worse, a positive sign of the deadly ileus. and obstruction that has progressed to the stage of feculent vomiting stands much in the same category as the acute appendix that has progressed to the stage of general peritonitis. The vomitus at first consists of the gastric contents, later it becomes bilious, then clear watery material comes up and finally feculent vomiting develops. At first, the vomiting is forceful, pump like, almost projectile in some cases, but later this quiets down and the stomach over flows in mouth fulls, so to speak.

While early and persistent vomiting is characteristic of obstruction, necessarily it cannot be pathognomonic.

Pain is nearly always, and shock always present.

There may be pain for ten days or two weeks before the acute onset. Suddenly, it becomes acute. If the obstruction is in the upper bowel, the pain is likely to be referred to the umbilicus; if in the lower bowel, to the hypogastrum.. In most cases, there will have been no premonitory pain, the entire picture being ushered in with sudden spasms of pain, varying in intensity and duration. A spasm can be induced by pressure of the palpating hand, differing in this respect from the pain of colic, which is relieved by pressure. The pain may leave as abruptly as it came, and the patient drop off to sleep, only to be awakened by the return of even more violent pain. If in the small bowel, the pain is likely to be more intense and the spasm more frequent than if the seat of the trouble is in the large intestine. With the onset of feculent vomiting, the pain subsides. One of the early signs of the concomitant shock is a drop in the blood pressure and slowing of the pulse rate.

The patient looks, and is, ill.

The stethoscope is of invaluable assistance since there is a peculiar tinkling sound produced by the pent up intestinal contents and air that is characteristic and unlike any other sound heard in the abdomen.

Flatus may come on early but frequently develops late.

Little dependence can be placed on the temperature or leucocyte count, as both may be normal until gross damage has been done to the gut. Emptying of the lower bowel of faecal matter should not mislead us.

McVicar in the American Journal of Medical Sciences, Vol. No. 169, discusses the laboratory and clinical findings in certain cases of upper gastrointestinal tract obstruction. After reviewing the subject of tetany in association with these cases of high obstruction he summarizes his conclusions by saying that:

(1) With the toxemia of high intestinal obstruction, characteristic changes occur in the chemistry of the blood, a

rise in the blood urea, a fall in the plasma chlorides, and a rise in the carbon dioxide combining power of the plasma.

(2) By a study of the chemistry of the blood, the condition can be recognized early, the severity can be measured, and the progress of treatment watched.

(3) No significant variation has been found in the concentration of the inorganic bases of the blood serum in this condition.

(4) Tetany should be considered as a possible severe complication of the toxemia, but severe toxemia may exist without tetany.

(5) Tetany may be anticipated when the carbon dioxide combining power of the plasma is found to be above 100 volumes per cent.

(6) The administration of sodium chloride, sugar, and water, has been found of value in treatment.

(7) All cases show a tendency to alkalosis, and the use of alkali in treatment is contraindicated.

Tetany is most frequently associated with obstruction around the pylorus, just above, at, or below this point. It may be associated with toxemia as far down as the cecum, the writer having seen a case of acute appendicitis ushered in by a most severe attack of tetany.

SUMMARY:

(1) Early persistent vomiting, associated with shock and hypogastric or umbilical pain should suggest acute intestinal obstruction.

(2) Ausculation of the abdomen is important and should be done.

(3) Blood chemistry studies should be instituted early and if high blood urea, low plasma chlorides and a high carbon dioxide combining power of the plasma are found they should be interpreted as evidence of severe toxemia, and probably, of tetany.

(4) Gastric lavage should be done, using a sodium chloride solution, and glucose and saline solution should be given either subcutaneously or intravenuously.

(5) Competent surgical aid should be sought immediately and an operation to relieve the obstruction perfomed as soon as diagnosed.

(6) Purgation is likely to hasten the fatal outcome.

ADDRESS DELIVERING "BADGE OF SERVICE" TO PRESIDENT, DR. C. K. SHARP*

J. A. REDFEARN, M.D.,
Albany

In my hand I hold a badge representing the highest honor that this Association confers annually on its President. Much time might be consumed in interpreting the meaning of this symbol, but it is wholly unnecessary for this audience. Therefore I shall spend a little while talking about you as a neighbor and friend, for man is more interesting than a medal.

About eighteen years ago, when seeking a place to locate for my life's work, I visited Arlington and met you when you took me across a field to a little farm house where a poor woman lay, a victim of cancer of the face—a horrible spectacle. I can still see you as you leaned over her pillow and spoke a word of cheer that cheered and smiled a smile that could not be returned save through the grateful expression of her eyes. Thus I learned from you the lesson that kindness is ever an aid to therapy. It was easy to recognize in you a man, a friend and a physician.

The same has been observed for almost a third of a century by the members of this Association. In fancy I can hear our departed past Presidents say in unity: "Well done, Brother!" And in reality I have seen smiles and heard words of approval from them that are yet with us. Since big men and men afar off are less critical let us inquire where the acid test is applied, meaning at home, of course, where you are judged by patients and brother physicians. Evidence

*Address before the annual banquet of the Medical Association of Georgia, Macon, Ga., May 9, 1929.

(Continued on Page 558)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Profession of Georgia

139 Forrest Ave., N. E., Atlanta, Ga.

DECEMBER, 1929

THE SEASON'S GREETINGS

To each and every member of the Association we extend sincere greetings and best wishes for a Merry Christmas and a Happy New Year. May God's choicest blessings be showered upon you and yours during this Yuletide Season.

1929

It is with a mixed feeling of gladness and sadness that we come to the close of the year nineteen hundred and twenty-nine: gladness because of the progressive work accomplished by the Association and sadness because of the death of several of our most loyal members and the disability of others who have been active for many years in all those things which have been for the best interests of the profession in Georgia and throughout the Nation.

Progress has been made all along the line. The work of the Council and committees has been characterized by a seriousness of purpose and an unselfish devotion to duty rarely seen in any organization. Our Presidents have demonstrated true qualities of leadership and our members have been constantly active in all things for the good of the Association. With such guidance and such interest and loyalty we are approaching a renaissance in Georgia medicine.

We close the year with the largest paid up membership in the history of the Association and also the largest number of organized constituent societies. Although it was found necessary to increase the annual dues from five to seven dollars at the last session we already have more paid up members for next year than we had last year at this time.

HEALTH EDUCATION WEEK

The first week of May, 1930, has been designated "Health Education Week" during which time lectures to the public will be given by members of the Association throughout the State. The Medical Department of the University of Georgia, Emory University School of Medicine and the State Board of Health are cooperating with the Association in promoting public health education through this series of lectures.

MEDICAL HISTORY OF GEORGIA

To the Members of the Medical Association of Georgia:

As most of you already know, the Committee on Medical History has offered a resolution towards the creation of a Department of Medical Archives, which will be located in the new State Historical Library, under supervision of Miss Blair already in charge of the State Archives of History of Georgia.

Along with this resolution, another was offered that I be appointed temporary Historian for the Medical Association of Georgia.

Any one, after the slightest investigation, will realize that practically nothing has been done towards preserving the medical and surgical records of our state.

If the Medical History of Georgia is ever written we must begin now to collect every pamphlet, newspaper or book bearing on the subject that can be found.

Some of the Northern Journals have complimented Georgia on creating a Department of History.

We can see a hopeful trend in matters historical generally; one of the outstanding colleges has recently designated a "professor of biography."

Since a start has been made in the right direction, let me ask that every member of the Association not forget that he should be personally interested in the success of this movement. Begin now to send every item you can find of historical interest and bearing on Georgia Medical History to Miss Blair, State Capitol, Department Archives of History, Atlanta.

Such items as old wills of doctors, letters, medical articles, photographs, licenses, old histories, newspaper articles, etc. If everyone will cooperate a great deal of valuable material can be gotten together in a few years.

The truth is, every member should write out a sketch of his life, with the medical work he has done, and send it along, with a photograph of himself for permanent filing in the Medical Library.

This department will be available to every doctor in Georgia and in a few years will be of untold help, particularly to those "historically minded."

There are innumerable points of interest about Georgia Medical History:

For example:

(1) Who was the first physician to pracice in Georgia?

(2) Who performed the first autopsy in Georgia?

(3) Who reported the first case of cerebro-spinal meningitis in Georgia?

(4) Who first extirpated the parotid gland in Georgia?

(5) What Georgia doctor invented the sewing machine?

Let me beg of each and every member that they cooperate to the fullest extent in helping to build up this historical department so that any information wanted about the doctors of Georgia will be ready at hand.

CALVIN WEAVER, M.D.

COMMITTEE ON SCIENTIFIC WORK

Rules

The Committee on Scientific Work, for the Annual Session of 1930 of the Association, held its first meeting in Milledgeville in November, during the meeting of the Tenth District Association which was in session at the time.

Those present were Dr. Wm. R. Dancy, President; G. Y. Moore, President-elect; Allen H. Bunce, Secretary-Treasurer and C. H. Richardson, Jr., Chairman of Committee.

The Committee decided that:

1. Any member of the Association in good standing, who has paid his 1929 dues, may submit a title for a proposed paper to be read at the annual meeting in May.
2. The essayists will not be required to submit a synopsis of the proposed paper.
3. All titles of papers must be in the hands of the Secretary by March 15, 1930.
4. Two invited guests are to be asked to make addresses before the Association.
5. The program will consist of the President's address, seven clinics and twenty-four papers and three alternate papers.
6. Members are urged to send in their titles early and it is hoped that enough will be submitted to make an equitable distribution over the State.

C. H. RICHARDSON, JR., M.D.,
Chairman.

ADDRESS DELIVERING "BADGE OF SERVICE" TO PRESIDENT, DR. C. K. SHARP

(Continued from Page 556)

shows abundantly that you have stood these and have been accepted as a man, a friend and a physician by home folks. You realized long ago that rural practice in this era did not offer sufficient volume of work to cope with your city brothers in scientific achievement but open spaces offered better vision to men who think. The vastness itself suggested more than mere individual service—in which you have excelled—so then we find you traveling throughout your community and state teaching mass prevention of diseases, never failing to emphasize the old adage: "The first wealth is health."

Work begun on malaria control, in which you have rendered inestimable aid, marks the beginning of a new era in Georgia, an example to be followed by the entire nation. During your useful life the family physician has flourished and apparently begun a decline. The relation of patient and physician has always been a sacred one reaching its maximum in the family physician. In this role of confidence, sharing the joys and heartaches of patients, you have risen to great heights standing out clearly as a worthy example to the young man in medicine. Your younger brother may be ever so changed—even unto the best cook in his community—still this sacred feeling will continue to exist. You have kept abreast of the times with its changes and thus continued to serve in a bigger and better way, richly deserving this reward. May your remaining years be many, your usefulness to all people continuously increased and your inspiring example ever encouraging your younger brothers to greater service. Dr. Sharp, in behalf of the Medical Association of Georgia it gives me much pleasure and happiness to present to you this "Badge of Service."

1930 HONOR ROLL*

1. Randolph County, Dr. G. Y. Moore, Cuthbert, September 5, 1929.
2. Barrow County, Dr. W. L. Mathews, Winder, December 5, 1929.

*Names of county societies are placed on the honor roll when all eligible doctors in the county are members of the Association.

NEW MEMBERS FOR 1929

Atkinson, H. C., Macon.
Cheney, G. W., Brunswick.
Chrisman, W. W., Macon.
Lewis, W. H., Rome.
McMichael, V. H., Macon.
Mitchell, F. B., Macon.
Patton, Lewis, Atlanta.

GEORGIA STATE NURSES' ASSOCIATION

Officers

President: Miss Lucia Massee, R. N., Cuthbert, Ga.

First Vice-President
Miss Alice F. Stewart, R. N., University Hospital, Augusta.

Second Vice-President
Mrs. Mae M. Jones, R. N., Georgia State Sanitarium, Milledgeville.

Secretary
Mrs. J. F. Hawthorne, R. N., 410 Arnold St., N. E., Atlanta.

Treasurer
Miss Jane Van De Vrede, R. N., 131 Forrest Ave., N. E., Atlanta.

COUNCILORS

Miss Annie Bess Feebeck, R. N., Grady Memorial Hospital, Atlanta.
Miss Vera Mingledorff, R. N., 209½ West Duffy St., Savannah
Miss Margaret Dorn, R. N., 1117 Telfair St., Augusta.
Miss Hattie Wilder, R. N., 118 Stonewall Place, Macon.

DOCTORS, NURSES AND THE COMMUNITY*

ALLEN H. BUNCE, M.D.

Editor, The Journal of the Medical Association of Georgia and Trustees of the American Medical Association, Atlanta, Ga.

In this day of mergers, mass production and machine methods industrial leaders are devoting an increasing amount of attention to the health of their employees and our state and national departments of health are broadening their fields of activity, but regardless of how efficient these may become they can reach only a relatively small percentage of our population. Therefore, two important questions facing us today are: first, are the citizens receiving adequate medical, nursing and health service at a cost which they can pay, and second, what are the respective duties and responsibilities of the medical and nursing professions, the hospitals, the public health service and the community?

Adequate Medical Service for All the People

Dr. Olin West, Secretary of the American Medical Association, has aptly stated that the greatest problem facing the medical profession today is that of finding means to render adequate medical service to all the people. This is more than a medical problem. It is an economic and social problem that concerns the future of the State since our greatest burden is the economic loss occasioned by the preventable and curable diseases of our citizens. These cost many times more than the total combined federal, state and municipal taxes.

The Supply and Distribution of Physicians

We now have over four hundred fewer doctors in Georgia than we had ten years ago, the increasing number in the cities being at the expense of the rural districts and smaller towns. Furthermore, the average age of the physicians in the smaller towns and rural communities is over fifty years showing that we may expect a still further decrease in those sections. This has been due to:

First, the increased time and cost of medical education. Since medicine has become more nearly an exact science it has been necessary to increase the length of time devoted to its study in order that physicians may be prepared to give patients the benefit of present medical knowledge. Where once the physician gave mostly calomel and quinine, he must now treat diphtheria with antitoxin, x-ray broken bones, give insulin for diabetes, perform transfusions and do many other things undreamed of a few years ago.

Second, the inability to earn a living and provide for a family in the rural districts. On account of the greater amount of time and money spent in preparation, recent graduates hesitate to locate in the rural districts since, there, they are not able, under present condi-

*Address delivered before the twenty-third Annual Session of the Georgia State Nurses' Association, Rome, Ga., morning session, Thursday, October 31, 1929.

tions, to earn a living and educate their children. Should the standards of medical education be lowered, as many have suggested? If so how are the people to differentiate between those who have been properly trained and those who have not? Is not the child of the humbled citizen in the most remote section of our state entitled to receive the same efficient care as the child of the most affluent citizen of our most populous city? Georgia doctors now earn an average of less than $2,400 annually. Surely we cannot expect them to work for less.

Georgia Hospitals

In Georgia we have 114 hospitals with a total bed capacity of 12,260; or one available bed to every 666 people, but during last year only 57 per cent of these beds were occupied; whereas, the ratio of hospital beds to population for the United States was one bed to every 270 people with 69 per cent occupied. More than 70 per cent of our counties have no hospital facilities whatsoever showing the concentration of available facilities in the cities. Notwithstanding the scarcity, more than 75 per cent of our hospitals are now being run at a financial loss. While the cost of hospital rooms has increased this increase has been less than that of hotel accommodations. Furthermore, the man who requests a two dollar hotel room demands a much more expensive hospital room.

Training Schools for Nurses

The number of training schools for nurses in Georgia has increased from 34 in 1922, to 54 in 1928, with a corresponding increase in the number of nurses. Although the first school of nursing established at St. Thomas' Hospital, London, in 1860, was directed, controlled and financed independently of the hospital and although this was continued by all the early schools of nursing, this function of running the training schools has been gradually taken over by the hospitals until now 98 per cent of all training schools are conducted directly by the hospitals themselves. This is true of all our training schools in Georgia, which alone accounts, in a large measure, for the over supply of poorly trained nurses.

Education of nurses a public function. The people provide agricultural, domestic science, commercial, engineering, law, religious and, to a limited extent, medical training for those desiring to follow these vocations. Then, why should they not, in some measure at least, provide for the training and education of nurses? This public function is now being performed by the hospitals, thereby, in many instances, increasing the cost of hospital care to the individual patient. Why should this extra burden be bourne by the already overtaxed sick? Furthermore, while the patients are entitled to the care of properly trained nurses, the student nurses are entitled to something in addition to practical training for the years spent in training. Other vocational schools usually have one hour of theory to four or five hours of practice whereas, even in our best schools, the nurses receive only one hour of theory to ten hours of practical work. It seems to me that the hours of study and practice in trainings schools for nurses should approach more nearly those found best for other vocational schools.

Training inadequate. Formerly the average age of those entering training schools was twenty or more years. More recently many schools admit student nurses under the required age of 18, before they have attained to that steadiness of purpose and stability of character which should be required of those entering a serious profession. The minimum educational requirement in Georgia, frequently not enforced, of two years high school work is very low indeed. While private duty nurses are plentiful and technical knowledge sufficiently supplemented with that education and culture which comes only from a broad general knowledge obtained by a study of history, literature and the fundamentals of mental hygiene and psychology.

Nurses should have personality and general culture. Personality, charm, a knowledge of mental hygiene, a practical understanding of psychology are becoming more and more requisite with the complex problems of modern life. These, together with a cultural background, can best be attained by a proper selection of students and adequate provision for study and development after they have entered school.

Too many training schools. We have too many training schools for nurses in Georgia graduating too many "attendants"—many of whom are not "trained nurses" except in a very liberal application of the term. Less than 25 per cent of our schools of nursing are equipped with facilities and personnel for giving proper training. These conditions are responsible for the average income of nurses being less than $700 annually. No wonder the frequent remark that our training schools are mere "matrimonial bureaus!"

The Community's Responsibility

The community provides the church, the school house and the court house—why, then should it not provide the hospital?

The crippled child, the child with defective vision, the child with hookworm disease and malaria is handicapped and is a burden when it could be easily turned into an asset. Pellagra and malaria are greatly on the increase in Georgia. Undulant fever is rapidly spreading over the entire state. Hookworm disease is still prevalent. Typhoid fever is all too widespread. Cancer is surely increasing. The surface has scarcely been scratched in the adequate care of the crippled child and the potentially mentally ill child. No wonder the study of crime is arousing nationwide interest when the great question of mental hygiene is so grossly neglected. These problems must be attacked at their source which is the community in which they exist.—The solution is the community hospital.

The Community Hospital. The method of organization and management must be solved by each community as best fits the locality. The doctors and nurses must have a place in which to perform their work. The physicians of Georgia are now devoting 30 per cent of their time to the care of those who are unable to pay for their medical care. Surely if the doctors give their time the community should provide a place where the work can be done and the facilities for doing it.

Cooperation to reduce cost of medical care. Cooperative methods may be applied to the more highly technical procedures in the chemical and clinical laboratories and x-ray plants. These should be located in the community hospitals and should serve the entire profession of the community, thus cutting down the overhead cost. Too many individual doctors now maintain individual laboratory and x-ray plants. In one city of our State there is one x-ray plant to every four physicians, where one to one hundred would be amply sufficient. This adds to the overhead cost which must be borne by the patient. Too many physicians have separate offices with all the necessary help to maintain them, often not using them more than an average of two to three hours daily, when the same office equipment and personnel might serve three or four doctors and thereby cut the overhead cost. Think of the economic saving which would result from all physicians' offices being in or adjacent to the hospital. One laboratory and x-ray plant could serve the entire staff whereas now we may find a dozen or more complete outfits owned and operated separately by members of the staff in addition to that owned and operated by the hospital.

Care of sick in the community. Ninety per cent of all sick patients can be adequately taken care of in their respective communities. The other ten per cent require the services of those physicians and surgeons who have had special training in certain specific fields and who limit their work to these fields of medicine and surgery. These of necessity must be located in the more populous centers.

Complete modern medical service can be rendered to all of our people by the proper cooperation between the doctors, the nurses, the hospitals and the community. We now have consolidated school districts. We see the advantage over the "old time" single room school house. By the same reasoning we should have consolidated hospital districts with community hospitals to take care of the people of each district. Then the child with a broken arm, the patient with diabetic coma and the patient which could be saved by an immediate transfusion could be brought to the hospital in a few minutes, where proper care could be received. In addition, these would become the logical local health centers cooperating with our state and national health services for the eradication of the preventable diseases.

WOMAN'S AUXILIARY
MEDICAL ASSOCIATION OF GEORGIA
OFFICERS

President—Mrs. Marion T. Benson, Atlanta.
President-elect—Mrs. Chas. C. Harrold, Macon.
1st Vice-President—Mrs. J. A. Selden, Macon.
2nd Vice-President—Mrs. H. D. Allen, Sr., Milledgeville.
3rd Vice-President—Mrs. J. A. Redfearn, Albany.
Recording Secretary—Mrs. Lee Howard, Savannah.
Corresponding Secretary—Mrs. W. H. Garrison, Clarkesville.
Treasurer—Mrs. Chas. E. Waits, Atlanta.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Editor—Mrs. C. W. Roberts, Atlanta.

DELEGATES TO A. M. A. (1930)

Mrs. William R. Dancy, Savannah.
Mrs. C. C. Hinton, Macon.

DELEGATES TO S. M. A., MIAMI

Mrs. J. Cox Wall, Eastman.
Mrs. Ralston Lattimore, Savannah.

COMMITTEES

EDUCATION AND PUBLIC HEALTH

Mrs. M. B. Allen, Hoschton.
Mrs. Ralston Lattimore, Savannah.
Mrs. Stewart D. Brown, Royston.
Mrs. O. H. Matthews, Atlanta.
Mrs. James B. Dillard, Davisboro.

PUBLIC POLICY AND LEGISLATION

Mrs. E. C. Thrash, Atlanta.
Mrs. L. G. Hardman, Atlanta.
Mrs. J. H. Downey, Gainesville.
Mrs. Wm. R. Dancy, Savannah.

FINANCE

Mrs. Chas. E. Waits, Atlanta.
Mrs. Jas. L. Lee, Pinehurst.
Mrs. Geo. M. Niles, Atlanta.
Mrs. Jas. C. Jenkins, Hartwell.
Mrs. Geo. C. Brooke, Canton.

ADVISORY

Mrs. Jas. N. Brawner, Atlanta.
Mrs. Wm. H. Myers, Savannah.
Mrs. C. W. Roberts, Atlanta.
Mrs. Paul L. Holliday, Athens.
Mrs. Chas. C. Hinton, Macon.

ORGANIZATION

Mrs. Chas. C. Harrold, Macon.
Mrs. Jas. H. Baxter, Ashburn.
Mrs. Jas. L. King, Macon.
Mrs. W. E. Simmons, Metter.
Mrs. C. W. Roberts, Atlanta.

HYGIENE

Mrs. H. W. Birdsong, Athens.
Mrs. W. A. Selman, Atlanta.
Mrs. A. J. Whelchel, Cordele.
Mrs. W. E. Mobley, Macon.
Mrs. E. B. Claxton, Dublin.

HEALTH FILM LIBRARY

Mrs. J. A. Selden, Macon.
Mrs. W. H. Garrison, Clarkesville.
Mrs. B. T. Wise, Americus.
Mrs. Gordon Chason, Bainbridge.
Mrs. Wm. Shearouse, Savannah.

CHRISTMAS 1929—NEW YEAR 1930

Greetings to the Members:

At this accustomed season when old friendships are renewed, and new ones cemented, let us sing a new our most grateful song—that our lives have been planted in such a joyful fellowship of kindred life, with its wondrous power to gladden and uplift—for our homes and loved ones, for our friends and friendships, for the high privileges of thought and health and work—and for our highest welfare, both for today and the long tomorrow at the hands of Infinite Love.

May your Christmas be a merry one, and the New Year full of happiness.

MRS. MARION T. BENSON,
President.

ELEVENTH DISTRICT MEETING DOUGLAS, OCT. 8

Call to order by the President, Mrs. H. G. Huey, Homerville.

Invocation by Rev. T. B. Sanford.

Address of welcome by Mrs. A. S. M. Coleman, Douglas.

Response to address of welcome by Mrs. H. G. Huey, Homerville.

Violin Solo—Liebstraum Listz by local talent.

Address by Mrs. W. C. Hafford, Waycross, "Advantages of a Health Officer."

Address by Mrs. J. E. Panland, Waycross, "Activities of the Woman's Auxiliary."

Vocal Solo—The Blond Polyghman.

Address by Dr. William R. Dancy, President of the Medical Association of Georgia, "Student Educational Fund."

The following officers were elected: Mrs. H. G. Huey, Homerville, President; Mrs. J. D. Wilcox, Willacoochee, Vice-President; Mrs. B. O. Quillian, Willacoochee, Secretary-Teasurer.

5 P. M.—Ride around the city.

6 P. M.—Barbecue dinner at Elk's club as guests of the Coffee county physicians and their wives.

MIAMI MEETING

At the twenty-third annual meeting of the Southern Medical Association held in Miami, Fla., November 19-22, Mrs. James N. Brawner was elected President of the Woman's Auxiliary to that body.

Mrs. Brawner has served as the first Presi-

dent of the Woman's Auxiliary to the Medical Association of Georgia and President of Fulton County Woman's Auxiliary in Atlanta. She has held important offices in other civic and Parent-Teacher organizations. Other officers elected were: Mrs. Arthur L. Walters, of Miami, Fla.; First Vice-President; Mrs. S. A. Collom, Texarkana, Texas, President-elect; Mrs. Ed Clay Mitchell, Memphis, Tenn., Second Vice-President; Mrs. H. W. E. Walters, New Orleans, Recording Secretary; Mrs. C. W. Roberts, Atlanta, Corresponding Secretary; Mrs. W. W. Crawford, Mississippi, Treasurer. The parliamentarian will be appointed.

Mrs. J. N. Brawner was installed in the office of President. Members of the Nominating Committee included Mrs. E. H. Carey, Chairman; Mrs. Southgate Leigh, Mrs. S. C. Red, Mrs. C. W. Roberts and Mrs. Seale Harris.

Social Affairs

The first social affair for the visiting ladies followed the first meeting of the Auxiliary. Mrs. F. A. Gowdy was Chairman of the event and assisting her were Mrs. G. E. Chandler, Mrs. W. A. Walters, Mrs. David Harris, Mrs. Buist Litterer, Mrs. Ralph Gowdy, Mrs. Gerard Raap and Mrs. Marvin Smith. Tropical decorations were featured in the luncheon decorative scheme with an abundance of pink hibiscus arranged in artistic effect. Corsages were presented to the honor guests and hand-painted cards marked places for all of the guests. Several hundred were in attendance. Seated at the speakers' table were: Mrs. Seale Harris, of Birmingham, former President of Southern Medical Association Auxiliary; Mrs. J. N. Brawner, President-elect of the S. M. A. A.; Mrs. M. R. Garrison, President of the S. M. A. A.; Mrs. S. C. Red, a former President of Auxiliary to A. M. A.; Mrs. A. L. Walters, President of the Dade County Auxiliary to the Medical Association; Mrs. M. A. Lischkoff, State President; Mrs. S. A. Collom, Chairman of Organization; Mrs. C. W. Roberts, Program Chairman; Mrs. Edward Mitchell, Treasurer; Mrs. J. W. Sams, recording Secretary, and Mrs. F. A. Gowdy, incoming President of Dade County Auxiliary. Dr. Thomas W. Moore, President of the Southern Medican Association, was a speaker at the morning session and Dr. Seale Harris who was also chosen as a speaker addressed the group on "The Woman's Auxiliary and Nutritional Clinics." Mrs. Garrison presided.

Mrs. Arthur L. Walters, Miami, Beach, Fla,. was chairman of the committee for the entertainment of the visiting ladies, the list of these having included:

Monday, November 18, 10 A. M.—Executive Board meeting at First Presbyterian Church.

Tuesday, November 19, 1:00 P. M.—Motorcade over Greater Miami.

Tuesday, November 19, 5:00 P. M.—A beach party and fish fry given by the Dade County Medical Association on Miami Beach. Swimming and surf bathing were enjoyed.

Wednesday, November 20, 9:30 A. M.—General meeting of the Woman's Auxiliary of the Southern Medical Association in the lounge room of the Columbus Hotel.

Wednesday, November 20, 1:00 P. M.—Luncheon to visiting ladies.

Wednesday, November 20, 9:30 P. M.—Reception for the president, members and guests of the Southern Medical Association, followed by a grand ball held at the Coral Gables Country Club, Coral Gables.

Thursday, November 21, 10.00 A. M.—Motorcade for day to Miami Beach, starting at 10.00 A. M. Water sports at the Roman Pools, followed by a luncheon at 1:30 P. M. Afternoon devoted to bathing and other entertainment on the beach.

Thursday, November 21, 10:00 A. M.—Golf tournament at the Miami Beach Municipal Golf Course.

Thursday, November 21, 8:00 P. M.—Theater party given by the Civic Theater of Greater Miami.

Friday, November 22—Afternoon musical tea at "Homewood," the home of the late Dr. James M. Jackson, Miami. Dr. Jackson was an ex-President of the Southern Medical Association.—The Atlanta Journal, Nov. 24, 1929.

ELECTROCARDIOGRAM IN ACUTE INFECTIONS

Clough Terrell Burnett and George F. Piltz, Denver (*Journal A. M. A.*, Oct. 12, 1929), presents a series of 100 patients who, following some acute infection, were especially studied with reference to possible heart injury. None of these had shown any signs or symptoms of heart disease prior to the recent infection. No cases of scarlet fever, diphtheria or frank rheumatism were included and none of these patients gave a history of rheumatic fever; twenty-eight of these furnished significant changes in the electrocardiogram. In twenty of these, symptoms and other signs of heart disease were lacking or confusing, and only three of the twenty-eight were either heart signs or symptoms sufficient to indicate heart injury. Pathologic and clinical evidence support the view that in the course of many types of acute infection the heart tissues are injured. Clinical recognition of this injury is often difficult or impossible. The electrocardiogram offers a means of diagnosis in a sufficiently large proportion of these cases to render its more general employment worth while.

BOOK REVIEWS AND ABSTRACTS

BOOK REVIEWS

Psychiatry in Industry, by V. V. Anderson, M.D., Director of Medical Research, R. H. Macy & Co., New York City (New York: Harper and Brothers, Publishers, 1929, 359 pp.)

Dr. Anderson's work with the National Committee on Mental Hygeine has prepared him to meet the many problems covered by psychiatry. There are no specialties in medicine which covers as large a territory as does psychiatry. It not only enters the home and sick room but it reaches out into every day life and occupations. It solves problems in our courts, school rooms, social service work, juvenile delinquencies, moral codes, etc. It helps to straighten out marital incompatabilities, properly train children, and prevent the placing of round pegs into square holes. Now, Dr. Anderson calls attention to its value in industry and shows how individuals who are handicapped with maladjustments can be adjusted and make a success of life which would otherwise have been a failure. He presents case histories of individuals occupying positions from an official nature down to the lowest employee, who, because of their inability to make their working and social adjustments, were failing to make good but after having these faults corrected attained success. In many of these case histories the individual had attributed their failure to make good to physical cause, lack of pull, and other equally as common excuses and had rationalized them sufficiently to make their relations, friends, and even themselves, believe their excuse for failure to be true. However, Dr. Anderson succeeded in showing them that the true cause was due to their inability to make their adjustments or other psychiatrical causes and thereby started them on the right pathway towards overcoming their handicaps.

This work will not have a very great appeal to the average physician because of his lack of interest in the psychiatrical side of medicine, but it opens up a new field of interest to those physicians who are doing corporation work and dealing with large numbers of working men and women. Because of the simplicity of expression this work can also be read to advantage by heads of large corporations since it will give them a better insight as to why some employees fail while others, less qualified perhaps, succeed. This work is just another straw which is gradually forcing the medical profession to recognize the importance of a psychiatrical training in order to successfully meet the demands of a progressive world.

NEWDIGATE M. OWENSBY, M.D.

BOOKS RECEIVED

Mental Deficiency (Amentia), by A. F. Tredgold, M.D., Durh., Lecturer on Mental Deficiency, London University; Associate physician in Psychological Medicine, University College Hospital; and Lecturer in the Medical School, etc. Fifth edition, (largely rewritten). Contains 535 pages. Price $7.50. Publishers: William Wood & Company, 156 Fifth Avenue, New York City.

A Study of Masturbation and the Psychosexual Life, by John F. W. Meagher, M.D., F. A. C. P., Neurologist to St. Mary's Hospital, Brooklyn; Neurologist to the Mary Immaculate Hospital; Consulting Psychiatrist to the Kings Park State Hospital; Consulting Neurologist to the Rockaway Beach Hospital; Ex-President of the Brooklyn Neurological Society; Member of the American Psychiatric Association, New York Neurological Society. Second edition. Contains 130 pages. Price, $2.00. Publishers: William Wood & Company, 156 Firth Avenue, New York City.

Sterilization for Human Betterment. A Summary of Results of 6,000 Operations in California, 1909-1929. By E. S. Gosney, B.S., LL.D., and Paul Popenoe, D. SC. Contains 202 pages. Price, $2.00. Publishers: The MacMillan Company, 60 Fifth Avenue, New York City.

An Introduction to the Study of Human Anatomy, by Robert James Terry, A.B., M.D., Professor in Anatomy in Washington University. Contains 346 pages. Price, $3.50. Publishers: The MacMillan Company, 60 Fifth Avenue, New York City.

Surgical and Medical Gynecologic Technic, by Thomas H. Cherry, M.D., F. A. C. S., Professor of Gynecology, New York Post-Graduate Medical School and Hospital; Director of Gynecology, Pan-American Hospital, New York City; Visiting Gynecologist, St. Mary's Hospital, New York City; Consulting Gynecologist, Morristown General Hospital, Morristown, New Jersey; Formerly Instructor in Operative Gynecology, New York Post-Graduate Medical School and Hospital, etc. Contains 678 pages with 558 half-tone and line engravings, from photographs and pen and ink drawings by the author. Publishers: F. A. Davis Company, 1914 Cherry Street, Philadelphia, Pennsylvania.

Pettibone's Textbook of Physiological Chemistry, with Experiments. Revised and rewritten by J. F. McClendon, Ph.D., Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. Contains 368 pages. Price, $3.75. Publishers: The C. V. Mosby Company, 3523-25 Pine Boulevard, St. Louis, Missouri.

Modern Methods of Treatment, by Logan Clendening, M.D., Professor of Clinical Medicine, Lecturer on Therapeutics, Medical Department of the University of Kansas; Attending Physician, Kansas City General Hospital; Physician to St. Luke's Hospital, Kansas City, Missouri. Third edition. Contains 815 pages. Price, $10.00. Publishers: The C. V. Mosby Company, 3523-25 Pine Boulevard, St. Louis, Missouri.

Bodily Changes in Pain, Hunger, Fear and Rage. An Account of Recent Researches into the Function of Emotional Excitement, by Walted B. Cannon, M.D., S.D., LL.D., George Higginson Professor of Physiology in Harvard University. Second edition. Contains 404 pages. Publishers: D. Appleton and Company, 35 West 32nd Street, New York City.

COMMUNICATIONS

MALARIA

To the Editor:

I am enclosing a letter which I have just written to Dr. ——— of ——— regarding some work we are trying to do on malaria. The letter, of course, is not complete in its detail but for all practical uses of the general medicine man, I feel that it may be of some assistance to them in their treatment of malaria. Therefore, I am submitting it to you for review, and if you see fit for publication in the Journal. If I can get enough of these cases to make a paper worth while I would like to be put on the program for the next state meeting. If you publish this please omit Dr. ——— name as I have not his consent to publish an open letter.

JOHN W. DANIEL, M.D.

Savannah, Oct. 22, 1929.

COPY

Dear Doctor:

I wish to thank you for co-operating with me in an effort to find something that would help your pernicious malaria cases.

These cases are of extreme interest in that they bring out one point, and that is that they run a low blood sugar, whereas, in most all other febrile diseases the blood sugar is increased. Case I had a blood sugar of 60 mgs. per 100cc. Of course, we must take into consideration that there was probably some glycolysis between the time the blood was taken and the chemistry made. Case II showed 115 mgs. The chlorides were normal in both cases, the nonprotein nitrogen, case I was normal, case II, 86 mgs. Both had 160 mgs. cholesterol which is normal. In the majority of cases of hepatic jaundice, or when there is damage to the liver, the cholesterol is increased, but, as we know, in these cases the jaundice was due to blood cell destruction.

Discussing the sugar content of these cases, it has been demonstrated that quinine also reduces the blood sugar considerably, so while it is not probable, yet the introduction of quinine into a vein may bring about a condition simulating insulin shock and this may be a factor in producing death in some of these cases. So if you give quinine intravenously, I think it would be a good idea to have some large ampoules of sterile glucose solution, 20 per cent, add the quinine to this glucose ,then add sufficient sterile water to reduce the solution to 10 per cent, and inject slowly into the vein. In this way I think you will lessen the danger of death and at the same time the glucose will act as a heart stimulant, and it is probably the best heart stimulant we have.

Referring back to the case of the man who died when I was in your hospital, I find that this sugar was 100 mgs., so the three cases run low blood sugar for patients with high temperatures. In the two cases we were able to make nonprotein nitrogen, therefore, able to determine the protein contents of the plasma. And this albumin content of the blood plasma, and the total has also proven of great interest in that we find the proteins, which include the fibrinogen and globulin, greatly reduced as you will see in analysis report. From this finding I conclude that the destruction of the red cells is probably more the result of some chemical change in the blood streams than to the mechanical rupturing of the blood cells by the plasmodium. It is a well known laboratory fact that you can macerate red cells in an isotonic solution thus breaking the stroma but not liberating the hemoglobin. While, on the other hand, when the protein content of the plasma is changed by some toxic material thus reducing the normal chemical ratio, there is a hemolysis and the liberating of the hemolobin from the stroma. It would take a long discussion to go into the details of this blood change but you can find it in any modern book on the principles of physiology.

The conclusion to be drawn from the determination of the plasma protein contents is that the emperical giving of horse serum has a rational basis, and I certainly would advise in these cases the giving of antistreptococcus serum, not so much for its specific effect upon strepticoccus infection, which does not exist, but for its antibody contents as well as its albumin, fibrinogen, globulin, etc. Just here let me revert back to the administration of quinine. It has never been shown, that I am aware of, that quinine has any direct effect upon the plasmodium but the benefit is derived from the antibodies which the quinine probably produces, so we get some antibodies from antistreptococcus serum as well as the benefit of the total proteins.

If you approve of my various theories of malaria I would like to have you try them out as I do not see any cases of this type here. If you have any more cases take the two specimens of blood as before with crystals in one syringe, 20cc blood, and to this add one drop of formaldehyde. This is to prevent glycolysis and will enable us to determine the blood sugar more accurately. In the other use 2cc 5 per cent citrate solution, 8 cc blood, making a total of 10 cc. Mail special delivery. Would like also some slides, hemoglobin termination, temperature, etc. After taking this blood suppose you then give the quinine in glucose and the antistreptococcus serum, repeating as often as necessary, and send blood specimen again at end of 24 hours, with temperature chart, etc.

I shall certainly appreciate further co-operation and wish I could come and spend some time and work with you in your hospital. With kindest regards, I am

JOHN W. DANIEL, M.D.

Savannah, Oct. 23, 1929.

Laboratory Findings

Case I. Blood chemistry: Sugar 60 mgs., chlorides

575 mgs., nonprotein nitrogen 30 mgs., cholesterol 160 mgs.

Case II. Blood chemistry: Sugar 115 mgs., chlorides 600 mgs., nonprotein nitrogen 86 mgs., creatinin 1.5 mgs., cholesterol 160 mgs.

Plasma Proteins: Grams per 100cc plasma.

	Normal	Case I	Case II
Fibrinogen	0.35-0.5	0.130	0.241
Globulin	1.9 -2.3	0.102	1.271
Albumin	4.6 -6.0	2.478	3.028
Total Protein	6.0 -8.0	3.580	4.299
Globulin-protein %	0.33	0.30	0.25
Albumin-Glob. ratio	2.2	2.2	2.3

ACCEPTED BY COUNCIL

To the Editor:

In addition to the articles enumerated in our letter of September 28 the following have been accepted:

Cutter Laboratory,
Diphtheria Toxoid-Cutter.
Eli Lilly & Co.,
Merthiolate.
Winthrop Chemical Co., Inc.
Luminal Capsules, 1½ grains.

Council on Pharmacy and Chemistry,
American Medical Association.

Chicago, Oct. 25, 1929.

PROPAGANDA FOR REFORM

Committee on Foods—The Council on Pharmacy and Chemistry has established a Committee on Nonmedicinal Foods to pass on all food products for which health claims might be made. The Committee has prepared a series of rules under which it proposes to operate and these have been approved by the Council on Pharmacy and Chemistry. Any product which it is desired to have considered for "Accepted Foods" should be presented to the Committee on Foods, American Medical Association (535 North Dearborn St., Chicago).

The rules for the acceptance of foods are patterned on the principles of New and Nonofficial Remedies, with such modifications and relaxations as are made necessary by the different nature of the products concerned. Reports on products considered, having received approval of the Committee, may be published in the Journal of the American Medical Association under the section devoted to the Council on Pharmacy and Chemistry with a special heading, "Committee on Foods." At the end of each year, all reports shall be assembled in book form, with the reports of all products accepted preceding the reports of all products rejected. This book shall have the title "Accepted Foods." (Jour. A. A. M., October 12, 1929, p. 1144.)

Liver Extract No. 343.—The Council publishes a report of the Committee on Pernicious Anemia of the Harvard Medical School. This report states that in May, 1927, the Committee on Pernicious Anemia of the Harvard Medical School was organized to study the properties and to determine the clinical value of the fractions of liver that were being extracted, and to determine in what way a satisfactory product could be made available. Under direction of this Committee, Eli Lilly & Co. offered to manufacture one of the extracts developed. The function of the Committee was merely to supervise the production of a suitable extract of known potency until such time as the medical profession should have become accustomed to its use. The treatment of more than 100 cases of pernicious anemia with this extract indicated that a satisfactory product was available and it was accepted by the Council on Phrmacy and Chemistry for New and Nonofficial Remedies, under the name "Liver Extract No. 343." For the past year Eli Lilly & Co. has regularly produced lots of material every one of which has been shown to be clinically effective in the treatment of pernicious anemia, by a standardized process approved by the committee. The committee now feels that its function of developing a reliable commercial product has been accomplished, and that it may therefore cease actively to supervise the manufacturing process. (Jour. A. M. A., October 12, 1929, p. 1144.)

The Committee on Foods.—The need of some body to express judgment of food products and food advertising, in the same way that the Council on Pharmacy and Chemistry considers medical preparations, has become apparent. The Council has therefore created a special committee on foods. The manufacturers of food products, distributors and all others interested in the promotion of natural food substances or of modified foods, for which claims are made in relation to the promotion of good health, will be asked to submit to the committee the products and the advertising material used in advancing their sale. If a product is found acceptable by the committee, advertisements of it will be permitted in the publications of the American Medical Association, the product will be listed in the book on foods similar to New and Nonofficial Remedies, and the manufacturers will be permitted to use a symbol indicating that the product has been accepted by the committee for listing in the book of foods. If the product cannot reach the standards set forth, a report will be published as is done for drug products, and advertising of the preparation will not be permitted in the publications of the American Medical Association. The work of the Committee on Foods should do much to carry still further the message of good hygiene and of scientific medicine. In beginning this work, the Council on Pharmacy and Chemistry again asks the complete support of the medical profession. Only by the sincere cooperation of the medical profession with the committee can it achieve the prestige necessary to complete attainment of its objects. Jour. A. M. A., October 12, 1929, p. 1147.)

NEWS ITEMS

Dr. Mark S. Dougherty, Atlanta, was awarded first prize for the best Scientific Exhibit on display at the meeting of the Southern Medical Association held at Miami, Florida, November 19, 20, 21, 22.

Dr. Montague L. Boyd, Atlanta, has been elected to membership in the International Urological Society.

In the entire United States there are only about thirty members. Dr. Boyd will attend the international conference of the society to be held in Madrid, Spain, in 1930.

Dr. M. A. Clark, Macon, gave a medical clinic before the Macon Medical Society on November 19. A Report of Clicinal Cases was given by Dr. A. M. Phillips.

The members of the Bulloch-Candler Counties Medical Society and the Woman's Auxiliary entertained the members of the Evans County Medical Society and the Auxiliary at the Community House in Statesboro on November 13th.

The Georgia State Board of Health with the Children's Bureau of the Department of Labor, Washington, D. C., sponsored a five day course in the Principles and Practices of Obstetrics given at Canton which began on December 16th. Dr. Jas. R. McCord, Atlanta, delivered a lecture each day, and in addition to the lectures showed moving pictures from the leading clinics in America and Europe.

Professors of anatomy in seven of the leading medical departments of American Universities are collaborating in a study of methods whereby anatomical research during the past hundred years may be graphically represented at the Chicago Century of Progress celebration in 1933. The universities represented are those of Chicago, Minnesota, Illinois, Michigan, Northwestern, Cornell and Johns Hopkins. The anatomy exhibits committee has just been appointed by its Chairman, Dr. R. R. Bensley, professor of Anatomy at the University of Chicago. Dr. Bensley is a member of the National Research Council's Science Advisory Committee which is charged with the task of formulating a science theme for the Chicago Exposition. Forty or more other groups of scientists, representing all the sciences in both the pure and applied fields, are working simultaneously with Dr. Bensley and his associates in collaboration with the Century of Progress trustees. The science theme will take the form of a moving panorama showing the march of science during the past hundred years. Dr. Bensley's appointees are Dr. Leslie B. Arcey, Northwestern University; Dr. Clarence M. Jackson, University of Minnesota; Dr. Carl G. Huber, University of Michigan; Dr. Otto F. Kampmeier, University of Illinois; Dr. Charles R. Stockard, Cornell University, and Dr. Lewis H. Webb, Johns Hopkins University.

Dr. Jas. R. McCord announces the removal of his office to 50 Armstrong Street, S.E., Atlanta.

The American College of Surgeons will hold its annual Clinical Congress at Philadelphia, October 13, 14, 15, 16, 17, 1930.

The Randolph County Medical Society held its monthly meeting on December 5th. Dr. E. C. McCurdy, Shellman, read a paper on Influenza, and Dr. W. W. Crook, Cuthbert, gave Case Reports.

Examination of candidates for commission as Assistant Surgean in the regular corps of the United States Public Health Service will be held at Washington, Chicago, New Orleans, and San Francisco on January 27, 1930. Candidates must be twenty-three years of age and not over thirty-two. They must have been graduated in medicine at a reputable medical college, and have had one year's hospital experience or two years' professional practice. Oral, written and clinical tests must be satisfactorily passed before a board of medical officers and undergo a thorough physical examination. Request for information should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

Dr. E. R. Park, LaGrange, has taken a post-graduate course at Tulane University of Louisiana School of Medicine, New Orleans.

The Third District Medical Society held its forty-fifth semi-annual meeting at Dawson on November 13th. Titles of papers on the Scientific Program were as follows: European Conditions, by Dr. Theodore Toepel, Atlanta; Some Eurologic Errors by Dr. J. T. Stukes, Americus; Perinephritic Abscess by Dr. Chas. H. Watt, Thomasville; Head Injuries by Dr. Chas. E. Dowman, Atlanta; X-Ray Examination of Head and Neck Injuries by Dr. Robt. C. Pendergrass, Americus; The Treatment of Hemoglobinuric Fever by Dr. H. M. Tolleson, Smithville; Endocervicitis by Dr. Herschel A. Smith, Americus; A Discussion of Hypertension by Dr. Steve P. Kenyon, Dawson; Address by Dr. William R. Dancy, President of the Association; Report of Councilor, Dr. B. T. Wise, Americus. The next meeting of the society will be held in Vienna.

Dr. H. W. Jernigan announces his association with Dr. Thomas P. Goodwyn. Office at 208 Medical Arts Building, Atlanta.

Teachers of Home Economics, Extension Work, and others engaged in bringing about a better understanding of nutritional requirements have been seeking suitable material to illustrate the effect of right feeding. To meet this need the Bureau of Home Economics of the U. S. Department of Agriculture has put out a series of nine charts for classrooms and lecture use. The set may be obtained for 50 cents (not in stamps), from the Superintendent of Documents, Government Printing Office, Washington, D. C.

The Butts County Medical Society met on November 12th. Committee for Medical Relief in Disaster was appointed as follows: Dr. A. F. White, Chairman, Flovilla; Dr. O. B. Howell, Jackson; Dr. B. F. Akin, Jenkinsburg; Dr. Robt. L. Hammond, Jackson.

Dr. and Mrs. D. B. Ware, Fitzgerald, entertained the members of the Ben Hill County Medical Society and their wives on the evening of November 5th. Other guests were: Dr. S. L. McElroy and Dr. G. W. Willis, Ocilla; Dr. Aubrey Harper, Wray.

The Hall County Medical Society was host to the physicians attending the intensive course in Principles

and Practice of Obstetrics given at Gainesville from December 2nd to 6th, inclusive, by Dr. J. R. McCord, Atlanta. The Georgia State Board of Health cooperated with the Children's Bureau of the Department of Labor, Washington, D. C., in fostering the school.

The regular staff meeting of the Davis-Fischer Sanatorium, Atlanta, was held on November 14th. Dr. H. H. Askew read a paper on Appendiceal Peritonitis and Its Treatment; Dr. O. O. Fanning read a paper on Influenza and Its Complications.

Dr. William O. Martin, Jr., announces the removal of his office to suite 412 Medical Arts Building, Atlanta. Practice limited to diseases of the eye.

The National Society for the Prevention of Blindness held its annual conference at St. Louis, Missouri, November 11, 12, 13.

Sectional meeting of the American College of Surgeons for Georgia, Florida, Alabama, Mississippi and Louisiana will be held in Atlanta on January 13-14. The following are state officers: Georgia—Dr. Marion T. Benson, Atlanta, Chiarman; Dr. Raymond L. Johnson, Waycross, Secretary; Dr. Cleveland Thompson, Millen, Councilor. Alabama—Dr. Louis E. Broughton, Andalusia, Chairman; Dr. E. V. Caldwell, Huntsville, Secretary; Dr. A. S. Frasier, Dothan, Councilor. Florida—Dr. John S. Helms, Tampa, Chairman; Dr. L. F. Carlton, Tampa, Secretary; Dr. R. O. Lyell, Miami, Councilor. Mississippi—Dr. T. E. Ross, Hattiesburg, Chairman; Dr. Van Buren Philpot, Houston, Secretary; Dr. Hugh E. Gamble, Greenville, Councilor. Louisiana—Dr. James Q. Graves, Monroe, Chairman; Dr. John F. Dicks, New Orleans, Secretary; Dr. L. H. Landry, New Orleans, Councilor. The propram includes operative clinics in the Atlanta hospitals in general surgery, eye, ear, nose and throat work and the other surgical specialties, a scientific meeting, medical motion pictures, and a hospital standardization program. Fellows of Alabama, Florida, Georgia, Mississippi, and Louisiana, and a group of visiting surgeons will furnish the program for the sceientific meetings. The clinical addresses will be given by visiting surgeons. You are cordially invited to attend.

Dr. D. Henry Poer announces the opening of his office at 601 Medical Arts Building, Atlanta. Practice limited to general surgery.

Dr. Wm. W. Puett, formerly of Eastman, has moved to Duluth and will continue the practice of medicine in that vicinity.

Dr. W. L. Green, Jr., formerly of Oconee, has removed to Crawford.

"The New York Polyclinic Medical School and Hospital wishes to announce that it has started wrecking the four buildings adjoining the Hospital, and will erect a ten-story building for an out-patient department, transferring the clinical space in its present building to the new building, thereby enlarging its wards so that it can take care of another 150 ward patients for teaching purposes. The Polyclinic Hospital now maintains one of the largest out-patient departments in New York City. The enormous growth of New York City in this central district served by the Polyclinic has made it absolutely essential that it provide increased quarters for its clinical work. The new building will be devoted to post-graduate teaching and will be fully equipped for all branches of Medicine and Surgery."

Dr. Henry Cliff Sauls announces the removal of his office to suite 703 Medical Arts Building, Atlanta. Practice limited to internal medicine.

The Sixth District Medical Society met at the Robert Strickland and Son Memorial Hospital, Griffin, on December 4th as the guest of the Spalding County Medical Society. The scientific program consisted of the following titles of papers: Lupus Leukoderma Treated with Gold Sodium Thiosulphate—Case Report by Dr. J. M. Sigman, Macon; Thorough Urological Examination by Dr. L. W. Pierce, Macon; Tonsils by Dr. R. L. Tye, McDonough; Treatment of Inoperable and Incurable Cancer of the Breast by Dr. Chas. C. Harrold, Macon; Conservative Treatment of Eclampsia by Dr. O. R. Thompson, Macon; Role of Prostatic by Dr. Wallace Bazemore, Macon; Treatment of Erysipelas with Antitoxin Serum by Dr. W. W. Chrisman, Macon.

Dr. C. D. Vinson, formerly of Atlanta, announces the removal of his office to 515 Macon National Bank Building, Macon.

OBITUARY

Dr. William Lewis Davis, Albany: Member, University of Louisville School of Medicine, 1886; aged 65; died at his home on November 11, 1929. He had practiced medicine in Albany for more than forty years and held in tender affection by all those he served. Dr. Davis was identified with all civic and religious work in the community. He was a member of the Memorial Baptist Church. Surviving him are his widow, one son, William J. Davis, Jr., two daughters, Mrs. J. B. Lanier and Mrs. J. B. Marshall. Funeral services were conducted by Rev. E. M. Palmer, assisted by Rev. L. G. Henderson. Interment was in Oakview cemetery.

Resolution

In the death of Dr. W. L. Davis on November 11, 1929, the Medical Association has lost one of its most faithful and loyal members. He has represented Dougherty County Medical Society as Delegate to the Medical Association of Georgia annually for more than a quarter of a century. He has served as president of this society. Dr. Davis has endeared himself to the public by his friendly and charitable manner; by his faithfulness to duty and love of his family, friends and God. Whereas, these facts being true:

Be it resolved, that we, the members of Dougherty County Medical Society will miss his comradeship and

(Continued on Page 583)

Medical Association of Georgia

Next Annual Session, Augusta, Ga., May 14, 15, 16, 1930

OFFICERS

President ..... Wm. R. Dancy, Savannah
President-elect ..... G. Y. Moore, Cuthbert
First Vice-Pres. ..... Chas. H. Richardson, Jr., Macon
Second Vice-Pres. ..... Grady N. Coker, Canton
Secretary-Treasurer ..... Allen H. Bunce, Atlanta
Parliamentarian ..... M. A. Clark, Macon

DELEGATES TO THE A. M. A.

Wm. H. Myers (1929-30) ..... Savannah
Alternate, Wm. A. Mulherin ..... Augusta
E. C. Thrash (1929-30) ..... Atlanta
Alternate, C. W. Roberts ..... Atlanta
O. H. Weaver (1930-31) ..... Macon

COUNCIL

M. M. Head, Chairman ..... Zebulon
C. L. Ayers, Clerk ..... Toccoa

Councilors

1. Wm. H. Myers (1930) ..... Savannah
2. J. A. Redfearn (1930) ..... Albany
3. B. T. Wise (1930) ..... Americus
4. O. W. Roberts (1930) ..... Carrollton
5. E. C. Thrash (1931) ..... Atlanta
6. M. M. Head (1931) ..... Zebulon
7. M. M. McCord (1931) ..... Rome
8. H. M. Fullilove (1931) ..... Athens
9. C. L. Ayers (1932) ..... Toccoa
10. S. J. Lewis (1932) ..... Augusta
11. A. S. M. Coleman (1932) ..... Douglas
12. J. Cox Wall (1932) ..... Eastman

Vice-Councilors

1. C. Thompson (1930) ..... Millen
2. R. F. Wheat (1930) ..... Bainbridge
3. Chas. A. Greer (1930) ..... Oglethorpe
4. W. H. Clark (1930) ..... LaGrange
5. W. A. Selman (1931) ..... Atlanta
6. K. S. Hunt (1931) ..... Griffin
7. W. H. Perkinson (1931) ..... Marietta
8. Paul L. Holliday (1931) ..... Athens
9. J. K. Burns, Jr., (1932) ..... Gainesville
10. H. D. Allen, Jr., (1932) ..... Milledgeville
11. K. McCullough (1932) ..... Waycross
12. J. W. Edmondson (1932) ..... Dublin

COMMITTEES

Scientific Work

C. H. Richardson, Jr., Chairman ..... Macon
C. W. Roberts ..... Atlanta
A. H. Bunce, Secretary-Treasurer ..... Atlanta

Public Policy and Legislation

Chas. E. Waits, Chairman (1931) ..... Atlanta
J. W. Palmer (1932) ..... Ailey
A. R. Rozar (1930) ..... Macon
Paul Eaton (1930) ..... Augusta
V. H. Bassett (1931) ..... Savannah
Wm. R. Dancy, President ..... Savannah
G. Y. Moore, President-Elect ..... Cuthbert
A. H. Bunce, Secretary-Treasurer ..... Atlanta
T. F. Abercrombie, Commissioner of Health State of Georgia ..... Atlanta

Medical Defense

M. A. Clark, Chairman (1933) ..... Macon
W. A. Mulherin (1934) ..... Augusta
E. C. Thrash (1931) ..... Atlanta
M. M. Head, Chairman of Council ..... Zebulon
A. H. Bunce, Secretary-Treasurer ..... Atlanta

Hospitals

C. S. Lentz, Chairman (1933) ..... Augusta
Grady N. Coker, Secretary (1932) ..... Canton
K. McCullough (1934) ..... Waycross
Geo. F. Klugh (1930) ..... Atlanta
Julian K. Quattlebaum (1931) ..... Savannah

Abner Wellborn Calhoun Lectureship

J. E. Paullin, Chairman (1933) ..... Atlanta
H. I. Reynolds (1934) ..... Athens
E. E. Murphey (1930) ..... Augusta
Craig Barrow (1931) ..... Savannah
Frank K. Boland (1932) ..... Atlanta

Necrology

R. L. Miller, Chairman ..... Weynesboro
M. Hines Roberts ..... Atlanta
J. R. Broderick ..... Savannah

Medical History of Georgia

E. C. Thrash, Chairman ..... Atlanta
Frank K. Boland ..... Atlanta
M. A. Clark ..... Macon
Wm. R. Dancy, President ..... Savannah
A. H. Bunce, Secretary-Treasurer ..... Atlanta

Crawford W. Long Memorial Prize

Wm. R. Dancy, Chairman ..... Savannah
Stewart R. Roberts ..... Atlanta
V. P. Sydenstricker ..... Augusta
George Bachmann ..... Atlanta
R. V. Lamar ..... Augusta

Cancer Commission

J. L. Campbell, Chairman ..... Atlanta
J. W. Simmons ..... Brunswick
G. H. Lang ..... Savannah
Chas. H. Watt ..... Thomasville
J. C. Patterson ..... Cuthbert
A. A. Barge ..... Newnan
H. G. Weaver ..... Macon
R. M. Harbin ..... Rome
M. B. Allen ..... Hoschton
Stewart D. Brown ..... Royston
W. J. Cranston ..... Augusta
J. W. Edmondson ..... Dublin
E. L. Bishop ..... Atlanta

Advisory Committee—Woman's Auxiliary

B. H. Minchew, Chairman ..... Waycross
Marion T. Benson ..... Atlanta
Paul L. Holliday ..... Athens
Wm. H. Myers ..... Savannah
Eugene E. Murphey ..... Augusta
Wm. R. Dancy, President ..... Savannah
A. H. Bunce, Secretary-Treasurer ..... Atlanta

Fraternal Delegates to Other State Meetings

To visit Alabama: R. F. Wheat, Bainbridge; C. K. Sharp, Arlington.

To Visit Florida: W. F. Reavis, Waycross; G. Y. Moore, Cuthbert.

To visit North Carolina: Hal M. Davison, Atlanta; C. D. Whelchel, Gainesville.

To visit South Carolina: Chas. C. Harrold, Macon; Wm. Shearouse, Savannah.

To visit Tennessee: Marion T. Benson, Atlanta; Linton Gerdine, Athens.

Directory of the Medical Association of Georgia for 1929

Names of all members and officers are published as corrected by Secretaries of county societies.

Officers

President.....Bowen, U. S.
Vice-President.....Bobyns, W. F.
Sec'y.-Treas.....Mobley, J. W., Jr.
Delegate.....Allen, H. D., Jr.

Members

Allen, E. W., Milledgeville
Allen, H. D., Jr., Milledgeville
Allen, H. D., Sr., Milledgeville
Anderson, S. A., Milledgeville
Binion, Richard, Milledgeville
Bostwick, W. A., Milledgeville
Bowen, U. S., Milledgeville
Bradford, R. W., Milledgeville
Cox, C. G., Milledgeville
Dobyns, W. F., Milledgeville
Echols, Geo. L., Milledgeville
Garrard, J. I., Milledgeville
Hall, T. M., Milledgeville
Longino, L. P., Milledgeville
Mobley, J. W., Jr., Milledgeville
Mobley, J. W., Sr., Milledgeville
Rankin, D. T., Milledgeville
Scott, W. M., Milledgeville
Statham, J. C., Milledgeville
Swint, R. C., Milledgeville
Walker, N. P., Milledgeville
Wheeler, Z. A., Milledgeville, (Hon.)
Wiley, Jno. D., Sparta
Yarbrough, Y. H., Milledgeville
Youmans, C. R., Milledgeville

BANKS COUNTY

Member

Deadwyler, Mat P., Maysville

BARROW COUNTY

Officers

Secy'y.-Treas.....Mathews, W. L.
Delegate.....Cross, R. C.

Members

Adams, R. P., Bethlehem
Almand, C. B., Winder
Bowdoin, W. H., Statham
Cross, R. C., Winder
Harris, E. R., Winder
Mathews, W. L., Winder
Pharr, L. P., Auburn
Randolph, W. T., Winder
Ross, S. T., Winder
Tramel, J. R., Statham

BARTOW COUNTY

Officers

President.....Wofford, W. E.
Sec'y.-Treas.....Horton, A. L.
Delegate.....Lowry, T.

Members

Adair, R. E., Cartersville
Banks, G. T., Fairmount
Bowdoin, J. P., Adairsville
Bradford, H. B., Pine Log
Burton, R. E., Kingston
Ellis, Chas. L., Kingston
Griffin, W. C., Cartersville
Horton, A. L., Taylorsville
Howell, S. M., Cartersville
Lowry, T., Cartersville
Pearson, H. C., Cartersville
Wofford, W. E., Cartersville

BEN HILL SOCIETY

Officers

President.....Ward, Frank
Vice-President.....Willis, G. W.
Sec'y.-Treas.....Osborne, L. S.
Delegate.....Osborne, L. S.

Members

Coffee, W. P., Fitzgerald
Dorminy, E. J., Fitzgerald
Dorminy, W. D., Fitzgerald
Frazer, J. L., Fitzgerald
Harper, A., Wray
Luke, J. C., Ocilla
McElroy, John, Fitzgerald
McElroy, S. L., Ocilla
Osborne, L. S., Fitzgerald
Russell, E. A., Fitzgerald, (Deceased)
Ward, Frank, Fitzgerald
Ware, D. B., Fitzgerald
Ware, R. M., Fitzgerald
Wilcox, C. H., Fitzgerald
Willis, G. W., Ocilla

BIBB COUNTY

Officers

President.....Ridley, C. L.
Vice-President.....Weaver, H. G.
Sec'y.-Treas.....Goolsby, R. C., Jr.
Delegate.....Applewhite, J. D.
Delegate.....Mobley, W. E.

Members

Adams, I. H., Georgia Casualty Bldg., Macon
Adams, J. F., Doctors Bldg., Macon
Anderson, C. L., Macon Nat'l. Bank Bldg., Macon
Anderson, J. C., Georgia Casualty Bldg., Macon
Andrew, James, Macon Nat'l. Bank Bldg., Macon
Applewhite, J. D., Health Department, Macon
Atkinson, H. C., Doctors Bldg., Macon
Barrow, H. L., 2515 Second St., Macon
Bashinski, Benj., Doctors Bldg., Macon
Bazemore, W. L., Macon Nat'l. Bank Bldg., Macon
Blackshear, T. E., 516 Mulberry St., Macon
Brown, J. F., Middle Georgia Sanitarium, Macon
Cater, R. L., Jr., 451 Cherry St., Macon
Chrisman, W. W., Doctors Bldg., Macon
Clark, M. A., Georgia Casualty Bldg., Macon
Clay, J. E., The Clinic, Macon
Coleman, Y. R., 518 Oglethorpe St., Macon
Corn, Ernest, Doctors Bldg., Macon
Cowart, J. W., Walden
Daniel, Orman, 451 Cherry St., Macon
Derry, H. P., 664 College St., Macon
Dove, W. B., 472 Second St., Macon
DuPree, G. W., Gordon
Fountain, J. A., Oglethorpe Infirmary, Macon
Garrard, J. A., Roberta
Golson, W. R., Roosevelt Hospital, New York City
Goolsby, R. Cullen, Jr., 700 Spring St., Macon
Gostin, B. S., The Clinic, Macon
Greene, B. W., Bibb Bldg., Macon
Hall, T. H., 617 Mulberry St., Macon
Harrington, F. Y., Georgia Casualty Bldg., Macon
Harrold, Chas. C., Doctors Bldg., Macon
Harrold, Thos., Doctors Bldg., Macon
Hembree, J. A., Bibb Bldg., Macon
Henderson, D. T., The Clinic, Macon
Hinton, C. C., Doctors Bldg., Macon
Holmes, J. P., Doctors Bldg., Macon
Hurley, T. A., The Clinic, Macon
Johnson, Geo. L., U. S. Veterans' Bureau, Atlanta
Johnson, J. E. L., Roberta
Kay, J. B., Byron
Keen, O. F., Oglethorpe Infirmary, Macon
Keiser, Jno. M., Bibb Bldg., Macon
Kemp, A. P., The Clinic, Macon
King, J. L., Grand Bldg., Macon
Martin, J. W., Bibb Bldg., Macon
Massenburg, G. Y., The Clinic, Macon
McAfee, J. C., Georgia Casualty Bldg., Macon
McAfee, L. C., Bibb Bldg., Macon
McMichael, V. H., Macon Nat'l. Bank Bldg., Macon
Meriwether, W. W., Georgia Casualty Bldg., Macon
Miller, G. T., Citizens & Southern Bank Bldg., Macon
Mitchell, F. B., The Clinic, Macon
Mobley, W. E., Doctors Bldg., Macon
Moses, Harry, Georgia Casualty Bldg., Macon
Newman, W. A., Doctors Bldg., Macon
Newton, R. G., Georgia Casualty Bldg., Macon
Palmer, S. B., Grand Bldg., Macon
Penington, C. L., Doctors Bldg., Macon
Pierce, Lovick W., Doctors Bldg., Macon

Porch, Leon D., Oglethorpe Infirmary, Macon
Pumpelly, Wm. C., Georgia Casualty Bldg., Macon
Rawls, Lewis L., Georgia Casualty Bldg., Macon
Respess, H., Grand Bldg., Macon
Richardson, C. H., Jr., Doctors Bldg., Macon
Richardson, R. W., Macon Hospital, Macon
Ridley, C. L., Bankers Health & Life Bldg., Macon
Rogers, T. E., Doctors Bldg., Macon
Rollins, W. J., Georgia Casualty Bldg., Macon
Ross, J. T., Citizens & Southern Bank Bldg., Macon
Rozar, A. R., Oglethorpe Infirmary, Macon
Selden, J. A., Macon Savings Bank Bldg., Macon
Sigman, J. M., Georgia Casualty Bldg., Macon
Spivey, O. S., Doctors Bldg., Macon (Deceased)
Stapler, M. M., Bibb Bldg., Macon
Thompson, O. R., Doctors Bldg., Macon
Vinson, C. D., Macon Nat'l. Bank Bldg., Macon
Walker, C. H., 617 Mulberry St., Macon
Walker, D. D., Doctors Bldg., Macon
Ward, J. B., Georgia Casualty Bldg., Macon
Weaver, H. G., Doctors Bldg., Macon
Weaver, O. H., Doctors Bldg., Macon
Webb, F. L., Bibb Bldg., Macon
White, W. S., Fort Valley
Williams, W. A., Georgia Casualty Bldg., Macon
Winship, Herring, 403 Cherry St., Macon
Wright, J. E., 324 College St., Macon

BLUE RIDGE SOCIETY

Officers

President ..... Daves, J. M.
Vice-President ..... Goss, N. C.
Sec'y.-Treas. ..... Crawford, C. B.
Delegate ..... Crawford, C. B.

Members

Crawford, C. B., Blue Ridge
Daves, J. M., Blue Ridge
Goss, N. C., Ellijay
Rogers, W. H., Young Cane
Tankersley, J. S., Ellijay

BROOKS COUNTY

Officers

President ..... Dorough, G. D.
Sec'y.-Treas. ..... McClure, R. E.
Delegate ..... McMichael, J. R.

Members

Clower, R. J., Morven
Dorough, G. D., Quitman
Jelks, E. L., Quitman
Moye, T. R., Quitman
McClure, R. E., Quitman
McMichael, J. R., Quitman
Smith, L. A., Quitman

BULLOCH-CANDLER COUNTIES

Officer

Sec'y.-Treas. ..... Simmons, W. E.

Members

Cone, R. L., Statesboro
Deal, B. A., Statesboro
Floyd, W. E., Statesboro
Jones, B. B., Metter
Kennedy, R. L., Metter
Kennedy, W. D., Metter
Miller, Clifford, Portal
Mooney, A. J., Statesboro
McElveen, J. M., Brooklet
Nevil, J. L., Metter
Olliff, H. H., Register
Patrick, J. Z., Pulaski
Simmons, W. E., Metter
Stapleton, C. E., Groveland
Stewart, J. A., Portal
Temples, A., Statesboro (Deceased)
Watkins, E. C., Brooklet
Whiteside, J. H., Statesboro
Woods, W. D., Portal

BURKE COUNTY

Officers

President ..... Sutton, W. Harry
Vice-President ..... Lewis, J. B.
Sec'y.-Treas. ..... Lowe, Wm. R.
Delegate ..... Miller, Robt. L.

Members

Bent, H. F., Midville
Byne, J. M., Jr., Waynesboro
Byne, J. M., Sr., Waynesboro
Cook, J. M., Sardis
Fulcher, M. O., Waynesboro
Hillis, W. W., Sardis
Lewis, J. B., Waynesboro
Lowe, Wm. R., Midville
Macauley, H. A., Waynesboro
McCarver, W. C., Vidette
Miller, Robt. L., Waynesboro
Morton, H. J., Waynesboro
Royal, L. B., Girard
Smith, B. H., Keysville
Sutton, W. H., Midville

BUTTS COUNTY

Officers

President ..... White, A. F.
Vice-President ..... Howell, O. B.
Sec'y.-Treas. ..... Hammond, Robt. L.
Delegate ..... White, A. F.

Members

Akin, B. F., Jenkinsburg
Hammond, Robt. L., Jackson
Howell, O. B., Jackson
White, A. F., Flovilla

CAMPBELL COUNTY

Officers

President ..... Bullard, T. P.
Vice-President ..... Camp, W. R.
Sec'y.-Treas. ..... Green, A. J.
Delegate ..... Camp, R. T.

Members

Bullard, T. P., Palmetto
Camp, R. T., Fairburn
Camp, W. R., Fairburn
Green, A. J., Union City

CARROLL COUNTY

Officers

President ..... Wilson, L. E.
Vice-President ..... Reese, D. S.
Sec'y.-Treas. ..... Goodwyn, H. J.
Delegate ..... Kirby, E. G.

Members

Aderhold, W. A., Carrollton
Baskin, C. L., Temple
Burnett, G. W., Whitesburg, (Hon.)
Camp, J. B., Carrollton
Fitts, C. C., Carrollton
Goodwyn, H. J., Carrollton
Griffis, J. C., Burwell, (Hon.)
Hogue, W. L., Villa Rica
Kirby, E. G., Bowdon
Nutt, J. J., Bowdon, R. 1
Powell, B. C., Villa Rica
Powell, Jno. E., Villa Rica
Reese, D. S., Carrollton
Roberts, O. W., Carrollton
Scales, S. F., Carrollton, R. 1
Smith, M. E., Grantville
Smith, W. P., Bowdon
Styles, O. R., Bowdon
Wilson, L. E., Bowdon

CHATHAM COUNTY

Officers

President ..... Exley, H. T.
Vice-President ..... Howard, Lee
Sec'y.-Treas. ..... Morrison, A. A.
Delegate ..... Shearouse, Wm.
Delegate ..... McGee, H. H.

Members

Baker, J. O., 126 East Oglethorpe Ave., Savannah
Barrow, Craig, Chippewa Square, Savannah.
Bassett, V. H., City Hall, Savannah
Blake, H. H., 408 Abercorn St., Savannah.
Blitch, J. R., Ellabell
Bray, S. E., DeRenne Apartments, Savannah
Broderick, J. R., 114 East Jones St., Savannah
Carter, J. N., 107 East Jones St., Savannah
Charlton, T. J., 220 East Oglethorpe Ave., Savannah
Chisholm, Julia F., 512 Abercorn St., Savannah
Clay, T. S., 120 East Jones St., Savannah
Cole, W. A., 20 East Taylor St., Savannah
Compton, H. T., 14 East Taylor St., Savannah
Corson, E. R., 11 West Jones St., Savannah
Crawford, W. B., 14 East Taylor St., Savannah
Dancy, William R., 102 Jones St., West, Savannah
Daniel, Jno. W., 1216 Drayton St., Savannah
DeCaradeuc, St., J. R., DeRenne Apartments, Savannah
DeLoach, L. A., 121 Jones St., West, Savannah
Demmond, E. C., DeRenne Apartments, Savannah
Drane, Robert, DeRenne Apartments, Savannah
Edwards, D. B., 604 Drayton St., Savannah
Egan, M. J., Jr., 110 East Liberty St., Savannah
Egloff, G. E., 324 West Liberty St., Savannah
Elliott, J. L., DeSoto Hotel, Savannah
Epting, M. J., 7 West Gordon St., Savannah
Exley, H. T., 116 Jones St., East, Savannah
Faggart, G. H., 18 West Oglethorpe Ave., Savannah

Gleaton, E. N., 213 East Gaston St., Savannah
Graham, R. E., 9 West Gordon St., Savannah
Harris, R. V., 19 East Gordon St., Savannah
Hesse, H. W., 106 East Jones St., Savannah
Holton, C. F., 21 East Gordon St., Savannah
Howard, Lee, DeRenne Apartments, Savannah
Iseman, E., 105 East Jones St., Savannah
Johnson, G. H., 116 East Oglethorpe Ave., Savannah
Jones, Jabez, DeRenne Apartments, Savannah
Jones, J. P., 109 Jones St., East, Savannah
Kandel, H. M., 213 East Gaston St., Savannah
Lang, G. H., 204 East Liberty St., Savannah
Lattimore, R., 13 Jones St., East, Savannah
Lee, Lawrence, DeRenne Apartments, Savannah
Levington, H. L., 109 East Gaston St., Savannah
Long, W. V., DeSoto Hotel, Savannah
Manor, E. N., 8 East Liberty St., Savannah
Martin, R. V., 109 Jones St., West Savannah
Massoud, M. A., Pineora
McGee, H. H., 7 West Gordon St., Savannah
Meldrim, C. H., 212 West 32nd St., Savannah
Morrison, A. A., 1704 Bull St., Savannah
Myers, Wm. H., 402 Drayton St., Savannah
Norton, W. A., 105 East Oglethorpe Ave., Savannah
Olmstead, G. T., 20 East Taylor St., Savannah
O'Neill, J. C., 202 East Liberty St., Savannah
Osborne, E. S., 19 Jones St., East Savannah
Quattlebaum, Julian K., 3 West Perry St., Savannah
Redmond, C. G., 707 Barnard St., Savannah
Reid, R. S., 108 East Harris St., Savannah
Righton, H. Y., 101 East Waldburg St., Savannah
Schwalb, Otto W., Savannah Hospital, Savannah
Shaw, L. W., 228 East Oglethorpe Ave., Savannah
Shearouse, J. W., 124 East Oglethorpe Ave., Savannah
Smith, W. K., Pembroke
Smith, W. W., Clyo
Strickland, J. O., Pembroke
Tarver, H. R., Guyton
Thomas, M. R., 202 East Oglethorpe Ave., Savannah
Tippins, H. L., 12 Jones St., West, Savannah
Touchton, G. L., 7 York St., West, Savannah
Train, J. K., 1107 Bull St., Savannah
Usher, Chas., 6 East Liberty St., Savannah
Usher, J. A., 1 East Henry St., Savannah (Deceased)
Usber, Sheddie, 12 West Harris St., Savannah (Deceased)
Wahl, Frederick, 3 East Gordon St., Savannah
Waring, A. J., DeRenne Apartments, Savannah
Waring, T. P., DeRenne Apartments, Savannah
Whelan, E. J., 116 East Liberty St., Savannah
Williams, L. W., 119 East Liberty St., Savannah
Wilson, W. S., 221 Jones St., East, Savannah

CHATTOOGA COUNTY

Officers

President.....Shamblin, B. F
Vice-President.....Talley, R. E.
Sec'y.-Treas.....Brown, H. D.
Delegate.....Talley, R. E.

Members

Brown, H. D., Summerville
Bryant, W. J.. Summerville
Clements, J. W., Gore (Hon.)
Funderburk, N. A., Trion
Hair, W. B., Summerville
Hall, F. W., Summerville
Jennings, E. M., Menlo
Mallicoat, L. A., Trion
Schreiber, E. E., Menlo
Shamblin, B. F., Lyerly
Smith, J. A., Lyerly, (Hon.)
Stanford, J. W., Trion
Talley, R. E., Trion
Wood, M. N., Menlo

CHEROKEE COUNTY

Officers

President.....Brooke, Geo. C.
Vice-President.....Turk, J. P.
Sec'y.-Treas.....Coker, Grady N.
Delegate.....Vansant, T. J.

Members

Bates, J. M., Canton
Boring, J. R., Canton
Brooke, Geo. C., Canton
Coker, Grady N., Canton
Coker, N. J., Canton
Faulkner, J. A., Canton (Deceased)
Garrison, D. H., Tate
Harbin, S. R., Canton
Hendrix, M. G., Ball Ground
McClain, M. C., Tate
McClure, G. C., Ball Ground
Moore, R. M., Waleska
Pettit, J. T., Canton
Rhodes, W. O., Holly Springs
Turk, J. P., Nelson
Vansant, Thos. J., Woodstock

CLARKE COUNTY

Officers

President.....Decker, C. J.
Vice-President.....Gerdine, Linton
Sec'y.-Treas.....Rayle, A. A.
Delegate.....Decker, C. J.

Members

Bagby, B. B., Courtland, Va.
Birdsong, H. W., Athens
Cabaniss, W. H., Athens
Canning, G. T., Athens
Chandler, B. B., Athens
Coile, F. W., Winterville
Deaver, E. S., Lexington
Decker, C. J., Athens
Fullilove, H. M., Athens
Gerdine, Linton, Athens
Goss, R. M., Athens
Green, Wm. L., Jr., Crawford
Green, W. L., Crawford
Holliday, A. C., Athens
Holliday, J. C., Athens
Holliday, P. L., Athens
Hubert, M. A., Athens
Hunnicutt, J. A., Jr., Athens
Johnson, T. H., Athens
Matthews, M. F., Athens
McKinney, J. C., Athens
Middlebrooks, C. O., Athens
Rayle, A. A., Athens
Reynolds, H. I., Athens
Smitb, S. S., Athens
Whelchel, G. O., Athens
Whitley, L. L., Crawford

CLAYTON-FAYETTE COUNTIES

Officers

President.....Busey, T. J.
Sec'y.-Treas.....Kemper, H. D.

Members

Busey, T. J., Fayetteville
Cannon, T. C., Jonesboro
Chambers, J. A. S., Inman
Henry, J. Z., Ellenwood
Jones, A. B., Tyrone
Kemper, H. D., Jonesboro
Lester, J. A., Fayetteville
Seawright, E. C., Fayetteville
Wallis, G. W., Fayetteville
Wallis, J. R., Lovejoy

COBB COUNTY

Officers

President.....Elder, C. D.
Sec'y.-Treas.....Welch, L. L.
Delegate.....Perkinson, W. H.

Members

Allen, G. O., Marietta
Bagley, D. A., 1724 Bankhead Ave., N. W., Atlanta
Bailey, E. M., Acworth
Banister, C. D., Blackwell
Brooks, C. C., Roswell
Burtz, C. W., Acworth
Crouch, H. W., Marietta
Donehoo, C. A., Marietta
Elder, C. D., Marietta
Ellis, J. W., Kennesaw
Ezzard, Thomas M., Roswell
Field, C. H., Marietta
Fowler, R. W., Marietta
Garrett, L. G., Austell
Gober, W. Mayes, Marietta
Haggard, Chas., Mabelton
Hagood, G. F., Marietta
Hamilton, R. E., Douglasville
Hicks, W. P., Collinsville, Ala.
Kelley, W. A., Smyrna
Kemp, W. M., Marietta
Lester, J. E., Kennesaw
Lindley, F. P., Powder Springs
Lyon, G. T., 745 Marietta St., Atlanta
Malone, J. D., Marietta
Middlebrooks, J. D., Powder Springs, (Hon.)
Osborne, J. C., Kennesaw, R. 3

Pace, W. T., Smyrna
Perkinson, W. H., Marietta
Power, I. C., Marietta
Reid, W. H., Austell
Terry, H. B., Acworth
Welch, L. L., Marietta

COFFEE COUNTY

Officers

President ..... Clark, T. H.
Vice-President ..... Quillian, B. O.
Sec'y.-Treas. ..... Hall, W. L.
Delegate ..... Vinson, S. L.

Members

Clark, T. H., Douglas
Coleman, A. S. M., Douglas
Hall, W. L., Nicholls
Meeks, D. H., Nicholls
Moorman, I. W., Douglas
Quillian, B. O., Willacoochee
Ricketson, G. M., Broxton (Deceased)
Shellhouse, L. H., Willacoochee
Sibbett, W. A., Douglas
Sibbett, W. F., Douglas
Smith, J. R., Douglas
Vinson, S. L., Douglas
Wallace, J. W., Douglas
Whelchel, H. C., Douglas (Deceased)

COLQUIT COUNTY

Officers

President ..... Bennett, W. L.
Vice-President ..... Lanier, J. E.
Sec'y.-Treas. ..... Chasnutt, T. H.
Delegate ..... Brannen, C. C.

Members

Bennett, W. L., Moultrie
Brannen, C. C., Moultrie
Chesnutt, T. H., Moultrie
Edmondson, H. T., Moultrie
Hitchcock, C. M., Moultrie
Lanier, J. E., Moultrie
Lawson, E. L., Moultrie
Whittendale, W. H., Norman Park
Withers, S. M., Moultrie

COOK COUNTY

Officers

Sec'y.-Treas. ..... Shepard, W. M.
Delegate ..... Askew, P. H.

Members

Askew, P. H., Nashville
Clements, H. W., Adel
Curtis, Walker L., Sparks
Hutchinson, L. R., Adel
Moore, W. A., Alapaha
Shepard, W. M., Adel

COWETA COUNTY

Officer

Sec'y.-Treas. ..... Barge, A. A.

Members

Bailey, T. S., Newnan
Barge, A. A., Newnan
Cochran, M. F., Newnan
Culpepper, W. F., Senoia
Davis, T. B., Newnan
Ebbert, C. A. P., Grantville (Deceased)
Kinnard, Geo P., Newnan
Peniston, Jeo. B., Newnan
Peniston, Paul, Newnan
Tanner, W. H., Newnan
Tribble, J. M., Senoia
Woodroof, W. L., Newnan

CRISP COUNTY

Officers

President ..... Bradley, T. E.
Vice-President ..... Lunsford, Guy G.
Sec'y.-Treas. ..... Dorminy, J. N.
Delegate ..... McArthur, T. J.

Members

Adams, Charles, Cordele
Bradley, T. E., Cordele
Dorminy, J. N., Cordele
Flournoy, H. C., Warwick
Harris, E. C., Rochelle
Harvard, V. O., Arabi
Heyward, A. R., Warwick
Lunsford, G. G., Cordele
Marshall, W. B., Cordele (Hon.)
Miller, W. A., Arabi
McAllister, J. M. C., Rochelle
McArthur, T. J., Cordele
Smith, M. R., Cordele
Wallace, F. R., Cordele (Hon.)
Ward, J. A., Cordele (Hon.)
Whelchel, A. J., Cordele
Williams, H. J., Cordele
Williams, L. E., Cordele
Williams, P. L., Cordele

DECATUR-SEMINOLE COUNTIES

Officers

President ..... Smith, E. C.
Vice-President ..... Wilkinson, W. L.
Sec'y.-Treas. ..... Spooner, Jno. I.
Delegate ..... Fort, M. A.

Members

Alford, A. E. B., Bainbridge
Bridges, E. C., Donalsonville
Bridges, R. L. Z., Brinson
Chason, Gordon, Bainbridge
Chason, Thomas, Donalsonville
Christiphine, S. A. V., Attapulgus
Ehrlich, M. A., Bainbridge
Ehrlich, Sigo, Bainbridge
Fort, M. A., Bainbridge
Smith, E. C., Donalsonville
Spooner, Jno. I., Donalsonville
Wheat, R. F., Bainbridge
Wilkinson, W. L., Bainbridge
Willis, L. W., Bainbridge

DEKALB COUNTY

Officers

President ..... Allgood, C. L.
Vice-President ..... Wilson, B. V.
Sec'y.-Treas. ..... Evans, J. R.
Delegate ..... Ansley, W. S.

Members

Allen, H. Homer, Decatur
Allgood, C. L., Scottdale
Andrews, W. W., Tucker
Ansley, W. S., Decatur
Bush, A. D., Decatur (Hon.)
Daniel, J. C., Decatur
Duncan, G. A., Decatur
Evans, J. R., Decatur
Pattillo, C. E., Decatur
Sweet, Mary F., Decatur
Watkins, A. R., Chamblee
Wilson, B. V., Decatur

DOOLY COUNTY

Officers

President ..... Bishop, L. H.
Vice-President ..... Mobley, H. A.
Sec'y.-Treas. ..... Williams, F. E.
Delegate ..... Bishop, L. H.

Members

Bishop, L. H., Unadilla
Daves, V. C., Vienna
Davis, E. B., Byromville
Edenfield, W. N., Vienna
Kitchens, Orren W., Byromville
Lee, J. L., Pinehurst
Mobley, H. A., Vienna
Pate, R. H., Unadilla
Williams, F. E., Vienna

DOUGHERTY COUNTY

Officers

President ..... Neill, F. K.
Vice-President ..... Tye, J. P.
Sec'y.-Treas. ..... Lucas, I. M.
Delegate ..... Tye, J. P.

Members

Bacon, A. S., Albany
Barnett, J. M., Albany
Benson, N. E., Albany
Cook, W. S., Albany
Davis, W. L., Albany (Deceased)
Hilsman, A. H., Albany
Irvin, I. W., Albany
Keaton, J. C., Albany
Lucas, I. M., Albany
McDowell, T. C., Albany
Neill, F. K., Albany
Redfearn, J. A., Albany
Robinson, Hugo, Albany
Sapp, E. F., Albany
Statham, O. W., Leesburg
Thomas, N. R., Albany
Tye, J. P., Albany
Welch, L. E., Albany

DOUGLAS COUNTY

Officers

President ..... Vansant, C. V.
Sec'y.-Treas. ..... Houseworth, D.

Members

Henley, J. T., 315 Mercer Ave., West, College Park
Houseworth, D., Douglasville
Vansant, C. V., Douglasville

ELBERT COUNTY

Officers

President ..... Stovall, A. S. J.
Vice-President ..... Smith, A. C.
Sec'y.-Treas. ..... Mattox, B. B.
Delegate ..... Bailey, D. V.

Members

Adams, F. L., Elberton, R. F. D.
Bailey, D. V., Elberton
Bond, Thos. W., Elberton (Hon.)
Gaines, T. H., Elberton, R. F. D.
Johnson, A. S., Elberton
Johnson, J. E., Elberton
Mattox, B. B., Elberton
Smith, A. C., Elberton
Stovall, A. S. J., Elberton
Thompson, D. N., Elberton
Walker, O. B., Bowman
Ward, G. A., Elberton, R. 1

EMANUEL COUNTY

Officers

President ..... Franklin, V. E.
Vice-President ..... Duffin, Chas. E.
Sec'y.-Treas. ..... Franklin, R. C.
Delegate ..... Coleman, E. T.

Members

Chandler, J. H., Swainsboro

Coleman, E. T., Graymont (Hon.) (Deceased)
Daniel, B. E., Claxton
Duffin, Chas. E., Swainsboro
Franklin, R. C., Swainsboro
Franklin, V. E., Graymont
Johnson, A. C., Garfield
Johnson, B. F., Garfield (Deceased)
Lucas, W. H., Stillmore
Nunez, J. M., Swainsboro
Sample, R. L., Summit
Smith, D. D., Swainsboro
Smith, G. L., Swainsboro
Youmans, S. S., Oak Park

EVANS COUNTY

Officers

President.....Elarbee, Geo. W.
Vice-President.....Daniel, Jno. W.
Sec'y.-Treas.....Ellis, S. T.

Members

Clanton, D. S., Hagan
Daniel, Jno. W., Claxton
Elarbee, G. W., Daisy
Ellis, S. T., Claxton
Miller, B. E., New Smyrna, Fla.

FLOYD COUNTY

Officers

President.....Dellinger, A. H.
Vice-President.....Mull, J. H.
Sec'y.-Treas.....McArthur, C. H.
Delegate.....Smith, G. B.

Members

Borders, W. A., Armuchee
Chandler, J. L., Rome
Cheney, J. N., Silver Creek
Conner, J. C., Cave Springs
Cox, R. P., Rome
Crane, J. F., Rome
Curry, J. W., Rome (Hon.)
Dellinger, A. H., Rome
Elmore, B. V., Rome
Floyd, W. B., Rome, R. 2
Garrard, J. L., Rome
Harbin, R. M., Rome
Harbin, W. P., Rome
Lewis, W. H., Rome
Maddox, R. C., Rome
Methvin, S. R., Lindale
Moore, Clifford, Lindale
Mull, J. H., Rome
McArthur, C. H., Rome
McCall, J. T., Rome
McCord, M. M., Rome
McKinney, W. T., Cave Springs
Radcliffe, E. J., Rome
Routledge, A. F., Rome
Shamblin, A. C., Rome
Shaw, W. J., Rome
Simmons, R. O., Rome
Smith, G. B., Rome
Temples, P. M., Rome
Watts, J. C., Rome
Wicker, R. H., Rome

FORSYTH COUNTY

Officer

Sec'y.-Treas.....Otwell, J. A.

Members

Brice, G. P., Flowery Branch, R. 2
Lipscomb, W. E., Cumming
Mashburn, Marcus, Cumming
Otwell, Jas. A., Cumming
Pirkle, W. W., Cumming

FRANKLIN COUNTY

Officers

President.....Brown, Stewart D.
Sec'y.-Treas.....Smith, B. T.

Members

Brown, J. R., Lavonia
Brown, S. D., Royston
Cornog, W. W., Lavonia
Freeman, J. M., Lavonia
McCrary, H. L., Royston
McCrary, J. O., Royston
Parker, G. M., Carnesville
Parker, Will, Ashland
Pool, E. T., Carnesville
Ridgway, G. T., Royston
Smith, B. T., Carnesville

FULTON COUNTY

Officers

President.....Waits, Chas. E.
Vice-President.....Brawner, Jas. N.
Sec'y.-Treas.....Hailey, Howard

Members

Abercrombie, T. F., State Capitol, Atlanta
Adair, Robin, Atlanta Nat'l. Bank Bldg., Atlanta (Deceased)
Adams, C. R., 948 Gordon St., S. W., Atlanta
Adams, G. B., Emory University
Adams, H. M. S., Candler Bldg., Atlanta
Aiken, W. S., Hurt Bldg., Atlanta
Alden, H. S., Medical Arts Bldg., Atlanta
Allen, E. A., Candler Bldg., Atlanta
Anderson, W. W., 478 Peachtree St., N.E., Atlanta
Armstrong, T. B., Hurt Bldg., Atlanta
Arnold, W. A., Atlanta Nat'l. Bank Bldg., Atlanta
Artaud, F. E., 13 Margaret St., Hapeville
Artega, Oliver, 948 Oakdale Road, Atlanta
Arthur, J. F., 105 Forrest Ave., N.E., Atlanta
Asher, Wm. T., 780 Ponce de Leon Ave., N.E., Atlanta
Askew, H. H., Candler Bldg., Atlanta
Atkins, F. M., 123 Forrest Ave., N.E., Atlanta
Avary, A., 97 Oakdale Road, Atlanta
Avary, J. C., 543 West Peachtree St., Atlanta
Aven, C. C., Medical Arts Bldg., Atlanta
Aycock, Mell, 126 Forrest Ave., N.E., Atlanta
Ayer, G. D., Medical Arts Bldg., Atltnta
Ayers, A. J., Medical Arts Bldg., Atlanta
Bachmann, J. Geo., Emory University (Honorary)
Baggett, L. G., 478 Peachtree St., N.E., Atlanta
Bailey, M. K., Medical Arts Bldg., Atlanta
Baird, J. B., Jr., Medical Arts Bldg., Atlanta
Baird, N. W., 607½ Lee St., Atlanta
Baker, W. Pope, 157 Forrest Ave., N.E., Atlanta
Ballenger, E. G., Healey Bldg., Atlanta
Ballenger, W. L., 478 Peachtree St., N.E., Atlanta.
Bancker, E. A., Jr., 139 Forrest Ave., N.E., Atlanta
Barber, W. E., Healey Bldg., Atlanta
Barfield, F. M., Healey Bldg., Atlanta
Barfield, J. R., 478 Peachtree St., N.E., Atlanta
Barnett, S. T., 26 Linden Ave., N.E., Atlanta
Bartholomew, R. A., 104 Ponce de Leon Ave., N.E., Atlanta
Beach, Asa, 26 Linden Ave., N. E., Atlanta
Bealer, Frank R., U. S. Navy Recruiting Station, Post Office Bldg., Atlanta (Associate)
Beall, C. R. F., U. S. Veterans' Hospital, Washington, D. C.
Beasley, B. T., Hurt Bldg., Atlanta
Benson, M. T., Medical Arts Bldg., Atlanta
Bishop, E. L., Steiner Clinic, Atlanta
Bivings, C. K., Exchange Bldg., Atlanta
Bivings, F. C., Exchange Bldg., Atlanta
Bivings, F. Lee, Exchange Bldg., Atlanta
Bivings, W. T., Exchange Bldg., Atlanta
Blackburn, J. D., 478 Peachtree St., N.E., Atlanta
Blackford, L. Minor, Medical Arts Bldg., Atlanta
Blackman, W. W., 2140 Peachtree Road, N.W., Atlanta
Blalock, Jno. C., Medical Arts Bldg., Atlanta
Blandford, W. C., Candler Bldg., Atlanta
Blincoe, Homer, Emory University
Block, E. B., 478 Peachtree St., N.E., Atlanta
Boland, Chas. G., Haas-Howell Bldg., Atlanta
Boland, F. K., 478 Peachtree St., N.E., Atlanta
Bonner, Lila M., 768 Juniper St., Atlanta
Bowcock, H. M., 478 Peachtree St., N.E., Atlanta
Boyd, M. L., 563 Capitol Ave., S.W., Atlanta
Boynton, C. E., 118 Forrest Ave., N.E., Atlanta
Brawner, A. F., 157 Forrest Ave., N.E., Atlanta
Brawner, Jas. N., 157 Forrest Ave., N.E., Atlanta
Brawner, L. E., 157 Forrest Ave., N.E., Atlanta
Brown, S. Ross, Atlanta Nat'l. Bank Bldg,. Atlanta
Brown, S. T., Medical Arts Bldg., Atlanta
Buff, J. H., Grand Bldg., Atlanta
Bunce, Allen H., 139 Forrest Ave., N.E., Atlanta
Burgess, T. S., Medical Arts Bldg., Atlanta
Burke, B. Russell, 478 Peachtree St., N.E., Atlanta
Bush, O. B., Atlanta Nat'l. Bank Bldg., Atlanta
Byram, Jas. H., Candler Bldg., Atlanta
Byrd, Edwin S., 26 Linden Ave., N.E., Atlanta
Byrd, H. O., 590 Chestnut St., Atlanta (Deceased)
Byrd, T. L., 104 Ponce de Leon Ave., N.E., Atlanta

Caldwell, A. F., Grant Bldg., Atlanta
Calhoun, Abner W., Medical Arts Bldg., Atlanta
Calhoun, F. P., 478 Peachtree St., N.E., Atlanta
Callaway, J. T., Hurt Bldg., Atlanta
Campbell, J. L., 478 Peachtree St., N.E., Atlanta
Campbell, M. G., 538 Ponce de Leon Ave., N.E., Atlanta
Campbell, W. E., Jr., Medical Arts Bldg., Atlanta
Catron, I. T., Candler Bldg., Atlanta
Champion, W. L., Grant Bldg., Atlanta
Childs, J. R., Hurt Bldg., Atlanta
Childs, L. W., Grant Bldg., Atlanta
Christopher, F. E., Hurt Bldg., Atlanta
Clark, J. J., 478 Peachtree St., N.E., Atlanta
Clark, W. B., Hurt Bldg., Atlanta
Clarke, M. L. B., Hurt Bldg., Atlanta
Clay, Grady E., Medical Arts Bldg., Atlanta
Clifton, B. H., Medical Arts Bldg., Atlanta
Cline, B. McH., Medical Arts Bldg., Atlanta
Cochran, A. H., Atlanta Nat'l. Bank Bldg., Atlanta
Cofer, Olin S., 139 Forrest Ave., N.E., Atlanta
Cole, G. C., 907 Marietta St., Atlanta
Collier, T. J., 1781 Peachtree St., N.E., Atlanta
Colvin, E. D., Hurt Bldg., Atlanta
Colvin, E. S., Healey Bldg., Atlanta
Combs, J. A., Atlanta Nat'l. Bank Bldg., Atlanta
Copeloff, M. B., Grant Bldg., Atlanta
Corley, F. L., Atlanta Nat'l. Bank Bldg., Atlanta
Cousins, W. L., Candler Bldg., Atlanta
Cowan, Z. S., Candler Bldg., Atlanta
Craig, Newton, 478 Peachtree St., N.E., Atlanta (Deceased)
Crawford, H. C., 478 Peachtree St., N.E., Atlanta
Crawford, J. H., Grant Bldg., Atlanta
Cromer, J. D., 157 Forrest Ave., N.E., Atlanta
Crowe, W. A., Smyrna
Curtis, C. M., College Park
Dabney, W. C., 105 Forrest Ave., N.E., Atlanta
Daly, Leo. P., Medical Arts Bldg., Atlanta
Daniel, C. H., 133 W. Rugby Ave., College Park
Daniel, W. W., Ga. Savings Bank Bldg., Atlanta
Daniels, Chas. W., 26 Linden Ave., N.E., Atlanta
Davenport, T. F., 104 Ponce de Leon Ave., N.E., Atlanta
Davis, E. C., 35 Linden Ave., N.E., Atlanta
Davis, J. E., Atlanta Nat'l. Bank Bldg., Atlanta
Davis, S. C., 714 Spring St., Atlanta
Davis, W. A., State Health Department, Capitol Bldg., Austin, Texas (Hon.)
Davison, Hal M., 478 Peachtree St., N.E., Atlanta
Davison, T. C., 478 Peachtree St., N.E., Atlanta
Dawson, A., 357 Peters St., Atlanta
Denton, J. F., 478 Peachtree St., N.E., Atlanta
Dickson, Roger W., 33 Ponce de Leon Ave., N.E., Atlanta
Dimmock, A. M., Hurt Bldg., Atlanta
Donaldson, H. R., Grant Bldg., Atlanta
Dorsey, R. T., 26 Linden Ave., N.E., Atlanta
Dougherty, Mark S., 139 Forrest Ave., N.E., Atlanta
Dowd, K. B., Medical Arts Bldg., Atlanta
Dowman, C. E., 158 Forrest Ave., N.E., Atlanta
Duncan, B. C., Candler Bldg., Atlanta
Duncan, John B., Fourth Nat'l. Bank Bldg., Atlanta
Dunn, W. M., Candler Bldg., Atlanta
Dunston, E. M., Ga., Baptist Hospital, Atlanta (Associate)
Duvall, W. B., 26 Linden Ave., N.E., Atlanta
Earnest, J. G., 843 Juniper St., Atlanta
Edgerton, M. T., Candler Bldg., Atlanta
Elder, O. F., Healey Bldg., Atlanta
Elkin, Dan C., 478 Peachtree St., N.E., Atlanta
Elkin, W. S., 478 Peachtree St., N.E., Atlanta, (Hon.)
Ellis, J. N., Atlanta Nat'l. Bank Bldg., Atlanta
Emery, W. B., Candler Bldg., Atlanta
Equen, M. S., Medical Arts Bldg., Atlanta
Eskridge, Frank, 744 West Peachtree St., Atlanta
Estes, H. G., Medical Arts Bldg., Atlanta
Etheridge, W. M., 590 Chestnut St., Atlanta
Fancher, J. K., Medical Arts Bldg., Atlanta
Fanning, O. O., Grand Bldg., Atlanta
Ferguson, I. A., Atlanta Nat'l. Bank Bldg., Atlanta
Fike, R. H., Albert Steiner Clinic, Atlanta
Fincher, E. F., 715 Flat Shoals Ave., N.E., Atlanta
Fischer, L. C., 35 Linden Ave., N.E., Atlanta
Fitts, J. B., Medical Arts Bldg., Atlanta
Flowers, A. P., Medical Arts Bldg., Atlanta
Floyd, Earl H., Hurt Bldg., Atlanta
Floyd, J. T., Medical Arts Bldg., Atlanta
Fort, A. G., Medical Arts Bldg., Atlanta
Fort, Lynn, Jr., 478 Peachtree St., N.E., Atlanta
Foster, K. E., College Park
Foster, Maude E., Hurt Bldg., Atlanta
Fowler, M. F., Grant Bldg., Atlanta
Freeman, J. F., 986 Hemphill Ave., N. W., Atlanta
Fuller, G. W., 478 Peachtree St., N.E., Atlanta
Fuller, J. R., Atlanta Trust Co. Bldg., Atlanta
Funke, John, 712 Durant Place, Atlanta
Funkhouser, W. L., 33 Kimball St., N.E., Atlanta
Fuqua, E. F., Grant Bldg., Atlanta
Gaines, L. M., Medical Arts Bldg., Atlanta
Gans, C. C., Fort McPherson, (Associate)
Gardner, W. A., Stone Mountain
Garner, J. R., 4 Hunter St., S.E., Atlanta
Gausemel, S. D., Candler Bldg., Atlanta
Gay, B. B., Haas-Howell Bldg., Atlanta
Gay, J. G., 104 Ponce de Leon Ave., N.E., Atlanta
Gay, T. B., Medical Arts Bldg., Atlanta
Giddings, C. G., 478 Peachtree St., N.E., Atlanta (Hon.)
Giddings, Glenville, 478 Peachtree St., N.E., Atlanta
Gilbert, W. L., Atlanta Nat'l. Bank Bldg., Atlanta
Goldsmith, Lauren H., Medical Arts Bldg., Atlanta
Goldsmith, W. S., 726 Hurt Bldg., Atlanta (Hon.)
Goodpasture, W. C., Medical Arts Bldg., Atlanta
Goodwyn, Thos. P., Medical Arts Bldg., Atlanta
Greene, E. H., 478 Peachtree St., N.E., Atlanta
Griffin, Claude, Medical Arts Bldg., Atlanta
Grove, L. W., Medical Arts Bldg., Atlanta
Guffin, T. F., East Point
Hailey, Howard, Candler Bldg., Atlanta
Hall, C. E., Fourth Nat'l. Bank Bldg., Atlanta
Hall, C. E., Jr., Fourth Nat'l. Bank Bldg., Atlanta
Hall, O. D., Medical Arts Bldg., Atlanta
Hames, F. W., Candler Bldg., Atlanta
Hancock, T. H., 320 Crew St., Atlanta
Hardin, L. S., Medical Arts Bldg., Atlanta
Harrison, M. T., Medical Arts Bldg., Atlanta
Herrot, Geo. W., Jr., Ga. Baptist Hospital, Atlanta (Associate)
Heyser, D. T., 190 Boulevard, S.E., Atlanta
Highsmith, E. D., Trust Co. of Ga. Bldg., Atlanta
Hodges, J. H., Hapeville
Hodges, W. A., 492 Page Ave., Atlanta
Hodgson, F. G., Medical Arts Bldg., Atlanta
Hoke, Michael, 15 West Alexander St., Atlanta
Holden, F. C., Ga. Baptist Hospital, Atlanta (Associate)
Holmes, C. H., 478 Peachtree St., N.E., Atlanta
Holmes, W. R., 478 Peachtree St., N.E., Atlanta
Hope, H. F., Roosevelt Boulevard, Atlanta
Hoppe, L. D., Medical Arts Bldg., Atlanta
Horton, B. E., Atlanta Nat'l. Bank Bldg., Atlanta
Howard, P. M., College Park
Howell, J. L., Medical Arts Bldg., Atlanta
Hudson, P. L., Atlanta Nat'l. Bank Bldg., Atlanta
Huguley, G. P., 126 Forrest Ave., N.E., Atlanta

Hunter, C. W., 744 West Peachtree St., N.E., Atlanta
Hurt, J. S., 478 Peachtree St., N. E., Atlanta
Hutchins, J. T., 287 McDonough Boulevard, S.E., Atlanta
Ivey, Jno. C., 35 Linden Ave., N.E., Atlanta (Associate)
Jackson, Zach W., 478 Peachtree St., N.E., Atlanta
Jenkins, M. K., Atlanta Nat'l. Bank Bldg., Atlanta
Jernigan, H. W., Medical Arts Bldg., Atlanta
Johnson, J. C., 478 Peachtree St., N.E., Atlanta
Johnson, Trimble, 478 Peachtree St., N.E., Atlanta
Jones, F. G., Medical Arts Bldg., Atlanta
Jones, Jack W., Medical Arts Bldg., Atlanta
Jones, Willis B., Atlanta Nat'l. Bank Bldg., Atlanta
Jones, W. T., 105 Forrest Ave., Atlanta
Kane, Thos. M., Hurt Bldg., Atlanta
Kea, V. E., Candler Bldg., Atlanta
Kelley, L. H., Hurt Bldg., Atlanta
Kemper, C. G., Medical Arts Bldg., Atlanta
Kennedy, H. B., Ga. Savings Bank Bldg., Atlanta
Kennedy, J. P., City Hall, Atlanta
Key, Claude T., 478 Peachtree St., N.E., Atlanta
Kinard, J. O., Candler Bldg., Atlanta
Kirkland, S. A., 478 Peachtree St., N.E., Atlanta
Kiser, W. H., Jr., Medical Arts Bldg., Atlanta
Kite, J. H., Scottish Rite Hospital, Decatur
Klausman, Marcus, Medical Arts Bldg., Atlanta
Klugh, Geo. F., 139 Forrest Ave., N.E., Atlanta
Kraft, H. N., Candler Bldg., Atlanta
Lake, Wm. F., Medical Arts Bldg., Atlanta
Landham, J. W., 139 Forrest Ave., N.E., Atlanta
Lawrence, C. E., Hurt Bldg., Atlanta
Leadingham, R. S., Medical Arts Bldg., Atlanta
Lee, C. A., Atlanta Nat'l. Bank Bldg., Atlanta
Linch, A. O., 157 Forrest Ave., N. E., Atlanta
Lineback, P. E., Emory University, (Hon.)
Lokey, H. M., Medical Arts Bldg., Atlanta
Longino, D. R., Medical Arts Bldg., Atlanta
Longino, T. D., 811 Park St., Atlanta
Lowance, Mason I., 478 Peachtree St., N.E., Atlanta
Lyle, W. C., Candler Bldg., Atlanta
Manget, J. D., 139 Forrest Ave., N. E., Atlanta
Martin, C. T., East Point
Martin, J. J., 478 Peachtree St., N.E., Atlanta
Martin, W. O., Medical Arts Bldg., Atlanta
Mashburn C. M., 139 Forrest Ave., N.E., Atlanta
Massee, J. C., 157 Forrest Ave., N.E., Atlanta
Matthews, O. H., 139 Forrest Ave., N.E., Atlanta
Miller, H. C., Hurt Bldg., Atlanta
Mims, F. C., Mortgage Guarantee Bldg., Atlanta
Minor, Henry W., Atlanta Nat'l. Bank Bldg., Atlanta
Mizell, G. C., 126 Forrest Ave., N.E., Atlanta
Monfort, J. M., Medical Arts Bldg., Atlanta
Moon, P. L., Atlanta Nat'l. Bank Bldg., Atlanta
Morris, S. L., Jr., Medical Arts Bldg., Atlanta
Muckenfuss, R. S., 600 King Highway, St. Louis, Mo.
Murray, G. M., 139 Forrest Ave., N.E., Atlanta
Muse, L. H., Medical Arts Bldg., Atlanta
McAliley, R. G., 104 Ponce de Leon Ave., N.E., Atlanta
McAllister, J. A., Hurt Bldg., Atlanta
McCay, C. G., Atlanta Nat'l. Bank Bldg., Atlanta
McClung, R. H., Candler Bldg., Atlanta
McCord, J. R., 50 Armstrong St., N.E., Atlanta
McDonald, H. P., Healey Bldg., Atlanta
McDonald, Paul, Bolton
McDougall, J. C., Medical Arts Bldg., Atlanta
McDougall, W. L., Atlanta Nat'l. Bank Bldg., Atlanta
McDuffie, H. F., 105 Forrest Ave., N.E., Atlanta
McGarity, Jas. A., 104 Ponce de Leon Ave., N. E., Atlanta
McGhee, J. L., Emory University, (Associate)
McLarty, M. W., Atlanta Nat'l. Bank Bldg., Atlanta
McRae, F. W., Jr., Medical Arts Bldg., Atlanta
McRae, J. C., Medical Arts Bldg., Atlanta
Nall, James D., R. F. D. No 9, Atlanta
Nellans, C. T., 139 Forrest Ave., N.E., Atlanta
Nesbit, F. C., Candler Bldg., Atlanta
Newberry, R. E., Candler Bldg., Atlanta
Nicholson, J. H., 26 Linden Ave., N. E., Atlanta
Nicolson, W. P., Jr., 478 Peachtree St., N.E., Atlanta
Niles, Geo. M., Candler Bldg., Atlanta
Noble, G. H., Jr., 294 Pryor St., S.W., Atlanta
Noble, G. H., Sr., 294 Pryor St., S.W., Atlanta
Norris, Jack C., Grady Hospital, Atlanta
Olds, Bomar, Medical Arts Bldg., Atlanta
Oppenheimer, R. H., Wesley Memorial Hospital, Emory University
Osborne, V. W., 427½ Moreland Ave., N.E., Atlanta
Owensby, N. M., Medical Arts Bldg., Atlanta
Paine, C. H., 123 Forrest Ave., N.E., Atlanta
Palmer, J. P., Albert Steiner Clinic, Atlanta (Associate)
Parham, LeRoy G., Medical Arts Bldg., Atlanta
Park, M. B., Atlanta Nat'l. Bank Bldg., Atlanta
Patton, F. J., Candler Bldg., Atlanta
Patton, Lewis, Medical Arts Bldg., Atlanta
Paullin, J. E., Medical Arts Bldg., Atlanta
Pentecost, M. P., Candler Bldg., Atlanta
Person, W. E., Candler Bldg., Atlanta
Pierce, J. Lewis, 1022 Park St., Jacksonville, Fla. (Asso.)
Pinson, C. H., Hapeville
Pirkle, C. I., 26 Linden Ave., N.E., Atlanta
Pitman, J. Lee, Jr., Atlanta Nat'l. Bank Bldg., Atlanta
Powell, J. H., Atlanta Nat'l. Bank Bldg., Atlanta
Powell, V. E., 768 Juniper St., Atlanta
Pruitt, M. C., Mortgage Guarantee Bldg., Atlanta
Quillian, G. W., Medical Arts Bldg., Atlanta
Quillian, W. E., Medical Arts Bldg., Atlanta
Ragan, W. E., Jr., Medical Arts Bldg., Atlanta
Ratliffe, J. W., Candler Bldg., Atlanta
Rawiszer, Hubert, Candler Bldg., Atlanta
Reed, Clinton, Candler Bldg., Atlanta
Reynolds, H. L., 123 Forrest Ave., N.E., Atlanta
Rhodes, C. A., Atlanta Nat'l. Bank Bldg., Atlanta
Rice, Keith C., 158 Forrest Ave., N.E., Atlanta
Ridley, R. B., Jr., Atlanta Nat'l. Bank Bldg., Atlanta
Riley, J. G., Grant Bldg., Atlanta
Roberts, C. W., 26 Linden Ave., N.E., Atlanta
Roberts, J. W., 478 Peachtree St., N.E., Atlanta
Roberts, M. H., 104 Ponce de Leon Ave., N.E., Atlanta
Roberts, S. R., 768 Juniper St., Atlanta
Robinson, L. B., Medical Arts Bldg., Atlanta
Robinson, W. C., Atlanta Nat'l. Bank Bldg., Atlanta
Rouglin, L. C., Hurt Bldg., Atlanta
Roy, Dunbar, Grand Bldg., Atlanta
Rushin, C. E., 478 Peachtree St., N.E., Atlanta
Russell, Ralph E., St. Joseph's Infirmary, Atlanta (Associate)
Sage, D. Y., Medical Arts Bldg., Atlanta
Sanders, A. S., 139 Forrest Ave., N.E., Atlanta
Sanford, Shelton, Medical Arts Bldg., Atlanta
Sauls, H. C., Medical Arts Bldg., Atlanta
Sawyer, Annie L., Biltmore Hotel, Atlanta
Saye, E. B., 891 Adair Ave., N.E., Atlanta
Schneider, J. F., Route 1, Box 112, Atlanta
Selman, W. A., 157 Forrest Ave., N.E., Atlanta

Shackleford, B. L., Medical Arts Bldg., Atlanta
Shallenberger, W. F., 33 Ponce de Leon Ave., N.E., Atlanta
Shanks, E. D., 478 Peachtree St., N.E., Atlanta
Shippey, S. H., Medical Arts Bldg., Atlanta
Sims, Marshall R., 157 Forrest Ave., N.E., Atlanta
Sinkoe, S. J., Hurt Bldg., Atlanta
Sloan, W. P., Candler Bldg., Atlanta
Smith, Archibald, Flatiron Bldg., Atlanta
Smith, Lewis M., Medical Arts Bldg., Atlanta
Smith, Linton, 427 Moreland Ave., N.E., Atlanta
Smith, M. F., 773 Cascade Ave., S.W., Atlanta
Smith, W. A., 158 Forrest Ave., N.E., Atlanta
Smith, W. R., 478 Peachtree St., N.E., Atlanta
Sommerfield, J. E., Healey Bldg., Atlanta
Spearman, G. F., Medical Arts Bldg., Atlanta
Spears, Thos. A., Trust Co. of Ga. Bldg., Atlanta (Deceased)
Stampa, Samuel, Candler Bldg., Atlanta
Stephens, R. G., Candler Bldg., Atlanta
Stewart, J. C., 1308 Stewart Ave., Atlanta
Stirling, A. W., Medical Arts Bldg., Atlanta
Stockard, Cecil, Candler Bldg., Atlanta
Strickler, C. W., 123 Forrest Ave., N.E., Atlanta
Swanson, C., 478 Peachtree St., N.E., Atlanta
Thomson, J. D., 158 Forrest Ave., N.E., Atlanta
Thornton, Lawson, 39 Crumbley St., S.E., Atlanta
Thrash, E. C., 157 Forrest Ave., N.E., Atlanta
Tidmore, T. L., 858 Adair St., N.E., Atlanta
Toepel, Theodore, Candler Bldg., Atlanta
Treusch, H. L., Candler Bldg., Atlanta
Trimble, Geo. C., East Point, (Hon.)
Turk, L. N., Jr., Candler Bldg., Atlanta
Wright, E. S., Medical Arts Bldg., Atlanta
Turner, J. W., Hurt Bldg., Atlanta
Upchurch, W. A., Atlanta Nat'l. Bank Bldg., Atlanta
Upshaw, C. B., 33 Kimball St., N.E., Atlanta
Van Dyke, A. H., Grant Bldg., Atlanta
Vaughn, C. J., 322 Houston St., N.E., Atlanta (Hon.)
Vaughn, Harry J., Medical Arts Bldg., Atlanta
Vernou, E. R., Medical Arts Bldg., Atlanta
Vinson, C. D., Macon Nat'l. Bank Bldg., Macon
Waits, Chas. E., Medical Arts Bldg., Atlanta
Walker, E. Y., 33 Kimball St., N.E., Atlanta
Ward, Emmett, Mortgage Guarantee Bldg., Atlanta
Warnock, R. T., Candler Bldg., Atlanta
Warren, W. C., Jr., Atlanta Nat'l. Bank Bldg., Atlanta
Warren, W. C., Sr., Atlanta Nat'l. Bank Bldg., Atlanta
Waters, W. C., 126 Forrest Ave., N.E., Atlanta
Weaver, J. C., 78 Ellis St., N.E., Atlanta
Wells, W. F., Medical Arts Bldg., Atlanta
West, C. M., Hurt Bldg., Atlanta
Westmoreland, W. F., 417 Tenth St., N. E., Atlanta
White, John B., Medical Arts Bldg., Atlanta
White, J. C., Atlanta Nat'l. Bank Bldg., Atlanta
White, J. R., 478 Peachtree St., N.E., Atlanta
White, O. T., 486 Jackson St., N.E., Atlanta
Wiggins, L. W., Atlanta Nat'l. Bank Bldg., Atlanta
Wilkins, C. A., Hurt Bldg., Atlanta
Williams, Geo. A., Candler Bldg., Atlanta
Willingham, T. I., Candler Bldg., Atlanta
Winchester, Milliard E., 4 Capitol Square, S.W., Atlanta
Wood, James A., 478 Peachtree St., N.E., Atlanta
Wood, R. Hugh, Medical Arts Bldg., Atlanta
Woodland, J. C., 4th Corps Area Headquarters, Atlanta (Asso.)
Yampolsky, Joseph, Candler Bldg., Atlanta
Yankey, W. E., 478 Peachtree St., N.E., Atlanta
Young, W. W., 478 Peachtree St., N.E., Atlanta

GLYNN COUNTY

Officers

President ..... Arkridge, H. L.
Vice-President ..... Branham, H. M.
Sec'y.-Treas. ..... Aldrich, F. N.

Members

Akridge, H. L., Brunswick
Aldrich, F. N., Brunswick
Branham, H. M., Brunswick
Burford, R. E. L., Brunswick
Burford, Robert S., Brunswick
Cate, G. V., Brunswick
Cheney, G. W., Brunswick
Dunwody, John A., Brunswick
Fishburne, C. C., Brunswick
Greer, C. B., Brunswick
Harrell, J. P., Brunswick
Quillian, E. P., Brunswick
Simmons, J. W., Brunswick

GORDON COUNTY

Officers

President ..... Barnett, W. R.
Vice-President ..... Banister, W. G.
Sec'y.-Treas. ..... Johnston, Z. V.
Delegate ..... Banister, W. G.

Members

Acree, M. A., Calhoun, R. 1
Banister, W. G., Plainville
Barnett, W. R., Calhoun
Borders, D. J., Calhoun, R. 2
Erwin, J. M., Calhoun
Fite, B. W., Resaca
Gray, R. M., Sugar Valley
Harp, S. M., Calhoun, R. 1
Johnston, Z. V., Calhoun
McLain, C. F., Calhoun
Richards, W. R., Calhoun
Rogers, R. L., Fairmount

GRADY COUNTY

Officers

President ..... Harden, J. E.
Vice-President ..... Moore, W. R.
Sec'y.-Treas. ..... Rogers, J. V.

Members

Arline, T. J., Cairo
Clower, Eugene, Cairo
Dykes, J. R., Swainesboro
Harden, J. E., Whigham
Lindsay, J. A., Cairo
Moore, W. R., Cairo
Rehberg, A. W., Cairo
Reynolds, A. B., Cairo
Rogers, J. V., Cairo
Walker, W. A., Cairo
Warnell, J. B., Cairo

GREENE COUNTY

Officer

Sec'y.-Treas. ..... Gheesling, Goodwin

Members

Adams, E. G., Greensboro
Gheesling, Goodwin, Greensboro
Lewis, Wm. H., Siloam
McGibony, J. R., Greensboro
Stapler, J. A., Greensboro

GWINNETT COUNTY

Officers

President ..... Hinton, C.
Sec'y.-Treas. ..... Kelley, D. C.
Delegate ..... Pierce, N. H.

Members

Cochran, J. S., Norcross
Covington, J. F., Norcross
Hinton, Chalmers, Lawrenceville
Hinton, W. T., Dacula
Hutchins, W. J., Buford
Kelley, D. C., Lawrenceville
Orr, J. C., Buford
Pierce, N. H., Suwanee

HABERSHAM COUNTY

Officers

President ..... Garrison W. H.
Vice-President ..... Jackson, J. B.
Sec'y.-Treas. ..... Lamb, R. B.
Delegate ..... Garrison, W. H.

Members

Brabson, T. H., Cornelia
Chandler, W. V., Baldwin
Collins, Katherine R., General Hospital, Spartanburg, S. C.
Duckett, P. Y., Cornelia
Garrison, W. H., Clarkesville
Glidden, Edson W., Alto (Hon.)
Harden, O. N., Cornelia
Jackson, J. B., Clarkesville
Lamb, E. H., Demorest
Lamb, R. B., Demorest
McClure, J. H., Cornelia

HALL COUNTY

Officers

President ..... Wellborn, C. J.
Vice-President ..... Titshaw, H. S.
Sec'y.-Treas. ..... Cheek, Pratt
Delegate ..... Neal, L. G.

Members

Bryson, L. R., Gainesville
Burns, J. K., Jr., Gainesville
Burch, J. C., Alto
Butler, C. G., Gainesville
Cheek, Pratt, Gainesville
Davis, B. B., Gainesville
Downey, J. H., Gainesville
Gibbs, E. T., Gainesville
Gower, J. Charley, Gainesville
Hodges, L. W., Gainesville
Liles, W. W., Gainesville
Meeks, J. L., Gainesville
Meeks, W. T., New Holland
Neal, L. G., Cleveland
Palmour, W. A. Gainesville
Phillips, H. K., Helen
Rogers, R. L., Gainesville
Rudolph, J. B., Gainesville (Deceased)
Titshaw, H. S., Gainesville
Wellborn, C. J., Gainesville
Whelchel, C. D., Gainesville
Whelchel, Fred C., Gainesville

HANCOCK COUNTY

Officers

President ..... Earl, H. L.
Sec'y.-Treas. ..... Jernigan, C. S.
Delegate ..... Jernigan, C. S.

Members

Darden, Horace, Sparta
Earl, H. L., Sparta
Hutchins, Earnest H., Sparta
Jernigan, C. S., Sparta

HARALSON COUNTY

Member

Malone, W. H., Tallapoosa

HART COUNTY

Officers

President ..... Harper, G. T.
Vice-President ..... Meredith, A. O.
Sec'y.-Treas. ..... McCurry, W. E.
Delegate ..... Harper, G. T.

Members

Clark, G. S., Hartwell
Hailey, W. I., Hartwell
Harper, G. T., Dewy Rose, R. 2
Jenkins, J. C., Hartwell
Jenkins, J. I., Bowman
McCurry, W. E., Hartwell
Meredith, A. O., Hartwell
Teasley, B. C., Hartwell

HENRY COUNTY

Officers

President ..... Smith, J. G.
Vice-President ..... Colvin, E. G.
Sec'y.-Treas. ..... Ellis, H. C.
Delegate ..... Tye, R. L.

Members

Carmichael, W. W., Hampton (Hon.)
Colvin, E. G., Locust Grove
Crawford, R. L., Locust Grove
Eberhart, A. B., McDonough
Ellis, H. C., McDonough
Harper, J. W., Hampton
Smith, J. G., McDonough
Tye, R. L., McDonough
Weldon, J. B., Hampton

HOUSTON-PEACH COUNTIES

Members

Cater, R. L., Perry
Evans, H. E., Perry
Riley, J. H., Perry

JACKSON COUNTY

Officers

President ..... Crow, H. E.
Vice-President ..... Hubbard, F. M.
Sec'y.-Treas. ..... Bennett, J. C.
Delegate ..... McDonald, E. M.

Members

Allen, L. C., Hoschton
Allen, M. B., Hoschton
Bennett, J. C., Jefferson
Crow, H. E., Talmo
Freeman, Ralph, Hoschton
Hardman, L. G., Commerce
Holcombe, T. L., Jefferson (Deceased)
Hubbard, F. M., Commerce
Kennedy, W. C., Talmo
Lord, C. B., Jefferson
McDonald, E. M., Jefferson
Rogers, A. A., Commerce
Sanders, Laetus, Commerce
Shankle, O. E., Commerce (Deceased)
Verner, J. C., Commerce

JASPER COUNTY

Officers

President ..... Anderson, J. F.
Vice-President ..... Belcher, F. S.
Sec'y.-Treas. ..... Lancaster, E. M.
Delegate ..... Cary, R. F.

Members

Anderson, J. F., Hillsboro
Belcher, F. S., Monticello
Brown, J. A., Shady Dale
Bullard, Jno. H., Machen (Deceased)
Cary, R. F., Monticello
Lancaster, E. M., Shady Dale
Pittard, L. Y., Monticello

JEFFERSON COUNTY

Officers

President ..... Holmes, Walter P.
Vice-President ..... Pitcher, Jno. J.
Sec'y.-Treas. ..... Revell, S. T. R.
Delegate ..... Bryant, V. L.

Members

Bryant, V. L., Bartow
Carpenter, Geo. L., Wrens
Holmes, Walter P., Wadley
Kelley, J. O., Avera
Ketchins, S. C., Louisville
Lewis, J. R., Louisville
Peacock, J. D., Wadley
Pilcher, Jno. J., Wrens
Revell, S. T. R., Louisville

JENKINS COUNTY

Officers

President ..... Perkins, M. E.
Vice-President ..... Lee, H. G.
Sec'y.-Treas. ..... Thompson, C.
Delegate ..... Mulkey, Q. A.

Members

Clifton, Ben L., Millen, R. F. D.
Haddock, S. H., Millen
Jones, J. M., Thrift
Lee, H. G., Millen
Mosteller, Malcolm, Columbia, S. C.
Mulkey, Q. A., Millen
Perkins, M. E., Millen
Thompson, C., Millen

JOHNSON COUNTY

Officers

President ..... Brantley, J. G.
Sec'y.-Treas. ..... Bray, H. B.

Members

Brantley, J. G., Wrightsville
Bray, H. B., Wrightsville
Harris, T. L., Wrightsville
Wheeler, Lee W., Kite

JONES COUNTY

Officers

President ..... Waits, W. J.
Sec'y.-Treas. ..... Zachary, J. D.

Members

Anderson, J. W., Gray (Hon.)
Waits, W. J., Gray
Zachary, J. D., Gray

LAMAR COUNTY

Officers

President ..... Willis, C. H.
Sec'y.-Treas. ..... Rogers, J. M.
Delegate ..... Corry, J. A.

Members

Anderson, Jno. M., Barnesville (Deceased)
Barron, J. M. F., Milner, R. F. D.
Corry, J. A., Barnesville
Rogers, J. M., Barnesville
Suggs, C. E., Barnesville
Willis, C. H., Barnesville

LAURENS COUNTY

Officers

President ..... Coleman, A. T.
Vice-President ..... Hodges, C. A.
Sec'y.-Treas. ..... Cheek, O. H.
Delegate ..... Hodges, C. A.

Members

Beddingfield, R. A., Cadwell
Beddingfield, W. E., Rentz
Benson, R. S., Alamo, R. 1
Carter, J. G., Scott
Chappell, R. J., Dudley
Cheek, O. H., Dublin
Claxton, E. B., Dublin
Coleman, A. T., Dublin
Edmondson, J. W., Dublin
Hodges, C. A., Dublin
Kea, T. B., Adrian
Maloy, Jim W., Rhine
Montford, H. L., Dublin
Moye, C. G., Brewton
Murray, D. L., Dexter
New, J. E., Dexter
Thompson, W. C., Dublin
Walker, Sidney, Dublin
Woodward, D. D., Dudley

LOWNDES COUNTY

Officers

President ..... Crozier, G. T.
Vice-President ..... Saunders, A. F.
Sec'y.-Treas. ..... Thomas, Jos. A.
Delegate ..... Mixson, J. F.

Members

Bird, Frank, Valdosta
Burns, D. L., Valdosta
Crozier, G. T., Valdosta
Elder, E. B., Knoxville, Tenn.
Ellis, S. B., Valdosta
Farmer, L. P., Fargo
Giddens, C. C., Valdosta
Griffin, A., Valdosta
Little, A. G., Valdosta
Meadows, C. B., Valdosta
Mixson, J. F., Valdosta
Owens, B. G., Valdosta

Pennington, J. W., Howell
Prescott, J. P., Lake Park
Quarterman, P. C., Valdosta
Saunders, A. F., Valdosta
Smith, E. J., Hahira
Smith, J. M., Valdosta
Smith, Lewis, Lakeland
Smith, T. H., Valdosta
Talbot, T. M., Valdosta (Hon.)
Thomas, F. H., Valdosta
Thomas, Jos. A., Valdosta
Thompson, E. F., Valdosta
Williams, T. C., Valdosta

MACON COUNTY

Officer

Sec'y.-Treas. . . Savage, C. P.

Members

Childs, J. N., Ideal (Hon.)
Derrick, H. C., Oglethorpe
Frederick, D. B., Marshallville
Greer, Chas. A., Oglethorpe
Lightner, L. L., Ideal
Mullino, F. M., Montezuma
Nelson, G. W., Marshallville (Hon.)
Richardson, C. H., Sr., Montezuma
Savage, C. P., Montezuma

MADISON COUNTY

Officers

President.....Westbrook, R. J.
Vice-President . . . Hampton, H. H.
Sec'y.-Treas.....Gholston, W. D.
Delegate.....Loden, G. L.

Members

Banister, H. G., Ila
Bryant, C. H., Comer
Gholston, W. D., Danielsville
Hampton, H. H., Colbert
Kelley, Geo. W., Carlton
Loden, G. L., Colbert
Whelchel, C. C., Comer
Westbrook, R. J., Ila

MERIWETHER COUNTY

Officer

Sec'y.-Treas.....Gilbert, R. B.

Members

Allen, W. P., Woodbury
Bennett, V. H., Gay
Dixon, J. L., Woodbury
Ellis, W. P., Chipley
Gilbert, R. B., Greenville
Jackson, J. L., Manchester
Jackson, T. W., Manchester
Johnson, J. A., Manchester
Witt, M. S., Manchester

MITCHELL COUNTY

Officers

President.....Roles, C. L.
Vice-President.....Williams, B.
Sec'y.-Treas.....Stevenson, C. A.
Delegate.....Clements, J. R.

Members

Belcher, D. P., Pelham
Clements, J. R., Pelham
Cranford, O. G., Sale City
Lewis, F. L., Camilla
Luke, D. P., Camilla
Reid, C. W., Pelham
Roles, C. L., Camilla
Stevens, A. T., Sale City
Stevenson, C. A., Camilla
Summerlin, J. A., Pelham
Williams, B., Pelham

MONROE COUNTY

Officers

President.....Goolsby, R. C., Sr.
Vice-President.....Clodfelter, T. C.
Sec'y.-Treas.....Elrod, J. O.
Delegate.....Alexander, G. H.

Members

Alexander, G. H., Forsyth
Elrod, J. O., Forsyth
Goolsby, R. C., Sr., Forsyth
Smith, B. L., Forsyth, R. 1
Smith, W. J., Juliette

MONTGOMERY COUNTY

Officers

Sec'y.-Treas.....Hunt, J. E.
Delegate.....Palmer, J. W.

Members

Dees, J. H., Alston
Hunt, J. E., Mt. Vernon
Moses, W. M., Uvalda
Palmer, J. W., Ailey
Sharpe, H. C., Alston

MORGAN COUNTY

Officers

President.....Porter, J. L.
Vice-President.....Fambrough, W. M.
Sec'y.-Treas.....Carter, D. M.
Delegate.....McGeary, W. C.

Members

Carter, D. M., Madison
Fambrough, W. M., Bostwick
McGeary, W. C., Madison
Porter, J. L., Rutledge

MURRAY COUNTY

Officers

President.....Bates, M. P.
Vice-President.....Bradley, R. H.
Sec'y.-Treas.....Dickie, E. H.

Members

Bates, M. P., Ramhurst
Bradford, J. E., Spring Place
Bradley, R. H., Chatsworth
Dickie, E. H., Chatsworth
Jones, F. M., Chatsworth
Kemp, R. C., Canasauga, Tenn.

MUSCOGEE COUNTY

Officers

President.....Dexter, C. A.
Vice-President.....Blackmar, F. B.
Sec'y.-Treas.....Schley, F. B.

Members

Anderson, J. M., Murrah Bldg., Columbus (Hon.)
Baird, J. M., Doctors Bldg., Columbus
Baker E. L., Masonic Temple, Columbus
Bickerstaff, H. J., 1301 Broadway, Columbus
Blackmar, Francis B., Woolworth Bldg., Columbus
Blanchard, Mercer, Swift Bldg., Columbus
Brannen, O. C., Murrah Bldg., Columbus
Brooks, H. W., 208 Thirteenth St., Columbus
Brooks, R. L., 208 Thirteenth St., Columbus
Bush, John, Doctors Bldg., Columbus
Campbell, W. H., 1036 Third Ave., Columbus
Cooke, W. L., Doctors Bldg., Columbus
Dexter, C. A., Murrah Bldg., Columbus
Dillard, Guy J., Murrah Bldg., Columbus
Dykes, A. N., Swift Bldg., Columbus
Floyd, C. F., 1301 Broadway, Columbus
Gilliam, O. D., Doctors Bldg., Columbus
Jenkins, W. F., City Hospital, Columbus
Johnson, C. D., Murrah Bldg., Columbus
Johnson, J. H., Murrah Bldg., Columbus
Johnson, R. F., Swift Bldg., Columbus
Jordan, W. P., Doctors Bldg., Columbus
McDuffie, J. H., Jr., Masonic Temple, Columbus
McDuffie, J. H., Sr., Masonic Temple, Columbus
Moses, Alice, P. O. Box 863, Columbus
Murray, G. S., Swift Bldg., Columbus
Norman, Frank P., Murrah Bldg., Columbus
Peacock, C. A., Murrah Bldg., Columbus
Pennington, J. H., Doctors Bldg., Columbus
Schley, Francis B., Swift Bldg., Columbus
Thompson, J. B., Swift Bldg., Columbus
Whitehead, W. F., Doctors Bldg., Columbus
Williams, R. L., Masonic Temple, Columbus
Willis, J. N., Swift Bldg., Columbus
Winn, J. H., Swift Bldg., Columbus
Wooldridge, J. C., Murrah Bldg., Columbus
Youmans, J. R., 1140½ Broad St., Columbus
Young, S. E., Midland

McDUFFIE COUNTY

Member

Boland, S. A., Thomson

NEWTON COUNTY

Officer

Sec'y.-Treas.....Travis, W. D.

Members

Lovelace, J. C., Porterdale
Randle, J. H., Covington
Sams, J. R., Covington
Travis, W. D., Covington
Waites, S. L., Covington
Wilson, Pleas, Newborn

OCMULGEE SOCIETY

(Bleckley, Dodge, Pulaski)

Officers

President.....Smith, Ernest L.
Vice-President.....Collum, O. F.
Sec'y.-Treas.....Bush, A. R.
Delegate.....Bush, A. R.

Members

Brown, E. C., Hawkinsville
Bush, Albert R., Hawkinsville
Coleman, W. A., Eastman
Collum, O. F., Chauncey
Massey, W. F., Chester
Parkerson, I. J., Eastman
Parramore, W. V., Cochran
Pirkle, W. H., Cochran
Smith, A. L., Cochran
Smith, Ernest L., Eastman
Smith, J. M., Cochran
Wall, J. C., Eastman
Whipple, R. L., Cochran
Yawn, B. W., Eastman

PICKENS COUNTY

Member

Atherton, H. G., Jasper

PIKE COUNTY

Officers

President ..... Grubbs, J. H.
Vice-President ..... Head, D. L.
Sec'y.-Treas. ..... Head, M. M.
Delegate ..... Grubbs, J. H.

Members

Graves, J. R., Zebulon
Grubbs, J. H., Molena
Head, D. L., Zebulon
Head, J. M., Zebulon, (Hon.)
Head, M. M., Zebulon
Howard, I. B., Williamson
Mallory, R. A., Concord

POLK COUNTY

Officers

Sec'y.-Treas. ..... Chaudron, P. O.
Delegate ..... Chaudron, P. O.

Members

Chaudron, P. O., Cedartown
Cooper, J. J., Cedartown
England, W. G., Cedartown
Good, Jno. W., Cedartown
McBryde, T. E., Rockmart
Peek, C. W., Cedartown
Pennington, J. E., Esom Hill
Whiteley, S. L., Cedartown
Williams, C. W., Cedartown
Wood, C. V., Cedartown

PUTNAM COUNTY

Officers

President ..... Taliaferro, V. H.
Sec'y.-Treas. ..... Griffith, E. F.

Members

Clodfelter, Thos. C., Eatonton
Griffith, E. F., Eatonton
Hamrick, H. P., Eatonton (Deceased)
Taliaferro, V. H., Eatonton

RABUN COUNTY

Officers

Sec'y.-Treas. ..... Green, J. A.
Delegate ..... Dover, J. C.

Members

Dover, J. C., Clayton
Green, J. A., Clayton

RANDOLPH COUNTY

Officers

President ..... Elliott, W. G.
Vice-President ..... Smith, D. L.
Sec'y.-Treas. ..... Moore, G. Y.
Delegate ..... Harper, T. F.

Members

Barfield, F. G., Jacksonville, Fla. (Hon.)
Binion, W. W., Benevolence
Carter, Geo., Bluffton (Hon.)
Cheney, R. L., Shellman (Hon.) (Deceased)
Crittenden, A. L., Shellman
Crook, W. W., Cuthbert
Elliott, W. G., Cuthbert
Gary, Loren, Georgetown
Harper, T. F., Coleman
Ingram, H. R., Coleman
Martin, F. M., Shellman
Moore, G. Y., Cuthbert
McCurdy, E. C., Shellman
Patterson, F. D., Jr., Auburn, Ala. (Hon.)
Patterson, F. D., Cuthbert
Patterson, J. C., Cuthbert
Rogers, F. S., Coleman
Rogers, W. T., Coleman (Deceased)
Saurez, Annette McD., Cuthbert (Hon.)
Saxon, T. S., Shellman (Hon.)
Shelley, W. P., Albany (Hon.)
Shepard, J. L., Carnegie
Smith, D. L., Cuthbert (Hon.)
Staples, J. H., Cuthbert (Hon.)
Taylor, H. W., Cuthbert (Hon.)
Terry, Wm. R., Shellman (Hon.)
Wade, C. E., Cuthbert (Hon.)
Wade, W. J., Cuthbert (Hon.)
Wimberly, William, Ft. Gaines (Hon.)
Weathers, A. F., Shellman

RICHMOND COUNTY

Officers

President ..... Bernard, G. T.
Vice-President ..... Kelly, G. L.
Sec'y.-Treas. ..... Ward, Chas. D.
Delegate ..... Chaney, R. H.
Delegate ..... Kelly, G. L.

Members

Agee, M. P., 753 Broad St., Augusta
Akerman, J. C., 831 Fifteenth St., Augusta
Battey, Colden R., Southern Finance Bldg., Augusta
Battey, W. W., Jr., 428 Sixth St., Augusta
Bedingfield, W. R., Southern Finance Bldg., Augusta
Bernard, G. T., 203 Thirteenth St., Augusta
Blanchard, C. A., 926 Broad St., Augusta
Blanchard, H. H., Gracewood
Blanchard, P. G., Appling
Brown, T. P., Marion Bldg., Augusta
Bryans, C. I., Lamar Bldg., Augusta
Bryson, R. I., Southern Finance Bldg., Augusta
Burdashaw, J. F., 724 Monte Sano Ave., Augusta
Butler, J. H., Southern Finance Bldg., Augusta
Chaney, Ralph H., Medical College, Augusta
Clayton, Malcolm D., 811 Metcalf St., Augusta
Crane, C. W., 1345 Greene St., Augusta
Cranston, W. J., Southern Finance Bldg., Augusta
Davidson, A. A., 1116 Greene St., Augusta
Eaton, Paul, Medical College, Augusta
Eve, H. J., 619 Greene St., Augusta
Goodrich, W. H., Southern Finance Bldg., Augusta
Gray, J. D., 1345 Greene St., Augusta
Harison, Wm. H., Jr., 122 Jackson St., Augusta
Harrell, H. P., Southern Finance Bldg., Augusta
Harris, R. L., U. S. Veterans' Hospital, Augusta
Hensley, E. A., Masonic Bldg., Augusta
Holmes, L. P., University Hospital, Augusta
Horne, G. T., Southern Finance Bldg., Augusta
Houston, W. R., Margaret Wright Hospital, Augusta
Hull, Asbury, Southern Finance Bldg., Augusta
Huson, W. Joseph, Masonic Bldg., Augusta
Jennings, W. D., 753 Broad St., Augusta
Kellogg, W. C., Southern Finance Bldg., Augusta
Kelly, G. Lombard, Medical College, Augusta
Kershaw, Theo., Southern Finance Bldg., Augusta
Kilpatrick, A. J., 704 Greene St., Augusta
Lamar, R. V., Medical College, Augusta
Lawless, Frank, Wilhenford Children's Hospital, Augusta
Lee, F. Lansing, Southern Finance Bldg., Augusta
Lentz, C. S., University Hospital, Augusta
Levy, M. S., Southern Finance Bldg., Augusta
Lewis, S. J., Southern Finance Bldg., Augusta
Lichtenstein, Samuel, Medical Department, U. of Ga., Augusta
May, E. R., Lincolnton
Mealing, H. G., Martintown Road, R. F. D., Augusta
Michel, H. M., Southern Finance Bldg., Augusta
Milligan, K. W., 942 Greene St., Augusta
Mountain, G. W., 2612 Walton Way, Augusta
Mulherin, F. X., Southern Finance Bldg., Augusta
Mulherin, W. A., Southern Finance Bldg., Augusta
Murphey, E. E., 432 Telfair St., Augusta
Oden, Jno. W., Gracewood
Oertel, T. E., Southern Finance Bldg., Augusta
Oliphant, Jones B., Mitchell
Page, Hugh N., 1345 Greene St., Augusta
Phinizy, Irvine, Southern Finance Bldg., Augusta
Price, W. T., Montgomery Bldg., Augusta
Pund, Edgar R., Medical College, Augusta
Rhodes, R. L., Southern Finance Bldg., Augusta
Roberts, W. H., 828 Greene St., Augusta
Robertson, J. Righton, 753 Broad St., Augusta
Roule, J. Victor, St. Landry Parish Health Unit, Opelousas, La.
Salley, O. B., 1962 McDowell St., Augusta
Scharnitzky, E. O., Southern Finance Bldg., Augusta
Shaw, H. W., Southern Finance Bldg., Augusta
Sherman, Jno. H., 1122 Johns Road, Augusta
Silver, D. M., Southern Finance Bldg., Augusta
Soper, R. W., U. S. Veterans' Hospital, Augusta (Associate)
Sydenstricker, V. P., University Hospital, Augusta
Tessier, L. P., Masonic Bldg., Augusta
Thurmond, J. W., 407 Seventh St., Augusta
Timmons, C. C., Marion Bldg., Augusta
Traylor, Geo. A., Southern Finance Bldg., Augusta
Walker, Louis M., U. S. Veterans' Hospital, Augusta (Associate)
Walton, C. R., U. S. Veterans' Hospital, Augusta

Ward, Chas. D., Southern Finance Bldg., Augusta
Weeks, J. L., Harlem
Weeks, R. B., Southern Finance Bldg., Augusta
Wilcox, E. A., Southern Finance Bldg., Augusta
Wright, Geo. W., Southern Finance Bldg., Augusta
Wright, J. C., Southern Finance Bldg., Augusta
Wright, Lewis H., 638 Greene St., Augusta
Wright, P. B., Lamar Bldg., Augusta

SCREVEN COUNTY

Officers

President ..... Downing, E. E.
Sec'y.-Treas. ..... Doster, H. W.
Delegate ..... Doster, H. W.

Members

Doster, H. W., Rocky Ford
Downing, E. E., Newington
Ezell, H. E., Oliver
Joyner, A. S., Woodcliff
Lanier, L. F., Sylvania
Lovett, W. R., Sylvania
Mims, S. W., Sylvania
Powell, J. W., Sylvania

SPALDING COUNTY

Officers

President ..... Griffith, C. F.
Vice-President ..... Austin, W. H.
Sec'y.-Treas. ..... Copeland, H. J.
Delegate ..... Miles, W. C.

Members

Anthony, E. R., Griffin (Hon.)
Anthony, J. R., Griffin
Austin, W. H., Griffin
Copeland, H. J., Griffin
Copeland, H. W., Griffin
Crowder, M. S., Griffin
Drewry, T. E., Griffin (Hon.)
Forrer, D. A., Griffin
Frye, A. H., Griffin
Griffith, C. F., Griffin
Hawkins, T. I., Griffin
Huckaby, A. H., Griffin
Humphries, W. C., Griffin
Hunt, K. S., Griffin
Miles, W. C., Griffin
Steele, W. H., Griffin
Tucker, C. L., Griffin
Wood, J. B., Griffin

STEPHENS COUNTY

Officers

President ..... Swain, W. H.
Vice-President ..... Terrell, J. H.
Sec'y.-Treas. ..... Ayers, C. L.
Delegate ..... Chaffin, E. F.

Members

Ayers, C. L., Toccoa
Chaffin, E. F., Toccoa
Craig, Alexander, Toccoa
Davis, Jeff, Toccoa
Edge, J. H., Toccoa (Hon.)
Heller, W. B., Toccoa
Isbell, J. E. D., Toccoa
Swain, W. H., Martin
Terrell, J. H., Toccoa

STEWART-WEBSTER COUNTIES

Officers

President ..... Grier, R. L.
Vice-President ..... Pickett, C. E.
Sec'y.-Treas. ..... Kenyon, J. M.
Delegate ..... Pickett, C. E.

Members

Alston, N. C., Richland (Hon.)
Foster, J. H., Preston
Grier, R. L., Lumpkin
Kenyon, J. M., Richland
Lovvorn, R. M., Richland
Lunsford, J. F., Preston
Lynch, C. S., Lumpkin
McCurdy, W. F., Richland
Miller ,T. B., Richland (Hon.)
Pickett, C. E., Richland
Sims, W. C., Richland
Tatum, W. J., Richland
Wimberly, J. S., Lumpkin

SUMTER COUNTY

Officers

President ..... Stukes, J. T.
Vice-President ..... Chambliss, J. W.
Sec'y.-Treas. ..... Cain, Sylvester
Delegate ..... Wise, B. T.

Members

Anderson, E. B., Americus
Bagley, Geo. W., Jr., DeSoto (Hon.)
Boggs, H. L., Cobb
Bridges, B. L., Ellaville
Cain, Sylvester, Plains
Chambliss, J. W., Americus
Jordan, J. R., Ellaville
Logan, J. C., Plains
Martin, J. D., Plains
Pendergrass, Robt. C., Americus
Prather, W. S., Americus
Primrose, A. C., Americus
Smith, Henry A., Americus (Deceased)
Smith, Herschel A., Americus
Stukes, J. T., Americus
Tolleson, H. M., Smithville
Ware, Ford, Americus
Wise, B. J., Plains
Wise, B. T., Plains
Wise, S. P., Americus
Wood, Kenneth, Leslie

TALBOT COUNTY

Officers

President ..... Peeler, J. E.
Vice-President ..... Leonard, W. P.
Sec'y.-Treas. ..... Carson, C. C.
Delegate ..... Carter, G. L.

Members

Carson, C. C., Talbotton
Carter, G. L., Talbotton
Leonard, W. P., Talbotton
Peeler, J. E., Woodland

TALIAFERRO COUNTY

Officers

President ..... Nash, T. C.
Sec'y.-Treas. ..... Ray, A. T.
Delegate ..... Rhodes, Jno. A.

Members

Davidson, A. C., Sharon (Hon.)
Nash, T. C., Philomath
Ray, A. T., Sharon
Rhodes, John A., Crawfordville

TATTNALL COUNTY

Officers

President ..... Tootle, G. W.
Vice-President ..... Collins, J. C.
Sec'y.-Treas. ..... Hughes, J. M.

Members

Bowen, Jno. H., Cobbtown
Branch, A. C., Glennville
Collins, J. C., Collins
Hughes, J. M., Glennville
Jones, R. D., Elza
Kennedy, J. J., Collins (Hon.)
Strickland, L. V., Cobbtown
Tootle, G. W., Glennville
Walling, C. B., Collins

TAYLOR COUNTY

Officers

President ..... Edwards, W. W.
Vice-President ..... Bryan, S. H.
Sec'y.-Treas. ..... Hind, J. C.
Delegate ..... Montgomery, R. C.

Members

Bryan, S. H., Reynolds
Edwards, W. W., Butler
Hind, J. C., Reynolds
Liggin, S. B., Reynolds
Montgomery, R. C., Butler

TELFAIR COUNTY

Officers

President ..... Powell, W. H.
Vice-President ..... Fussell, T. D.
Sec'y.-Treas. ..... Molay, C. J.
Delegate ..... Mann, Frank

Members

Born, W. H., McRae
Fussell, J. K., Rhine, R. F. D.
Fussell, T. D., Rhine, R. F. D.
Harrell, A. O., Milan
Jones, A. J., Jacksonville
Kennon, B. M., McRae (Hon.)
Maloy, C. J., Helena
Molay, D. W. F., Milan
Mann, Frank R., McRae
McMillan, Thos. J., Milan
Napier, LeRoy, Lumber City (Hon.)
Neal, J. W., Scotland
Powell, W. H., Lumber City

TERRELL COUNTY

Officers

President ..... Kenyon, S. P.
Sec'y.-Treas. ..... Thomas, Logan L.
Delegate ..... Dean, J. G.

Members

Arnold, J. T., Parrott
Bowman, R. E., Bronwood
Chappell, Guy, Dawson
Cranford, J. R., Sasser
Dean, J. G., Dawson
Durham, Wm. P., Sasser
Holt, R. R., Parrott
Kenyon, S. P., Dawson
Lamar Lucius, Dawson
Lewis, J. H., Dawson
Patterson, J. W., Dawson
Thomas, Logan L., Dawson

THOMAS COUNTY

Officers

President ..... Erickson, Mary J.
Vice-President ..... King, J. M.
Sec'y.-Treas. ..... Wall, C. K.

Members

Ainsworth, Harry, Thomasville
Andrews, Agnew, Thomasville
Austin, G. L., Pavo
Bell, R. F., Boston
Bevans, J. L., Col., Archibold Memorial Hospital, Thomasville
Brinson, J. B., Monticello, Fla. (Hon.)
Cheshire, S. L., Thomasville

Erickson, Mary J., Thomasville
Ferguson, C. H., Thomasville
Garrett, J. A., Meigs
Glover, G. B., Monticello, Fla., (Hon.)
Hill, Roy A., Thomasville
Isler, J. N., Meigs
Jarrell, W. W., Thomasville
Jones, Henry, Coolidge
King, J. M., Metcalf
King, J. T., Thomasville
Lanier, J. R., Thomasville
Little, A. D., Thomasville
Lundy, L. L., Boston
Moore, H. M., Thomasville
Palmer, J. B., Thomasville
Pitman, James F., Thomasville
Reid, James W., Thomasville
Reilley, C. J., Thomasville
Sanchez, S. E., Barwick
Vann, H. A., Boston (Hon.)
Wahl, Ernest, Thomasville
Wall, C. K., Thomasville
Wall, H. A., Ochlocknee
Watt, C. H., Thomasville
Williams, J. F., Monticello, Fla. (Hon.)

TIFT COUNTY

Officers

President ..... Smith, W. T.
Sec'y.-Treas ..... Pittman, C. S.
Delegate ..... Peterson, N.

Members

Dinsmore, V. F., Tifton
Evans, E. L., 813 Love Ave., Tifton
Harrell, D. B., Tifton
Hendricks, W. H., Tifton
Peterson, N., Tifton
Pickett, F. B., Ty Ty
Pittman, Carl S., Tifton
Price, J. M., Tifton
Shaw, M. F., Omega
Smith, W. T., Tifton
Tyson, W. E., Chula

TOOMBS COUNTY

Officer

Secy'y.-Treas. ..... Odom, W. W.

Members

Aiken, W. W., Lyons
Alexander, G. T., 302 Tenn. Valley Bank Bldg., Huntsville, Ala.
Camp, J. A., Ohoopee
Currie, M. L., Vidalia
Findley, C. W., Vidalia
Hall, J. K., Lyons
Mercer, J. E., Vidalia
Odom, W. W., Lyons
Youmans, H. D., Lyons

TRUELTON COUNTY

Member

Lanier, L. I., Soperton

TRI SOCIETY

(Calhoun, Early, Miller Counties)

Officers

Sec'y.-Treas. ..... Shepard, W. O.
Delegate ..... Standifer, J. G.

Members

Barksdale, C. R., Blakely
Beard, J. S., Edison
Bridges, R. R., Leary
Calhoun, W W., Arlington
Cheshire, J. L., Damascus
Darden, Holt, Blakely
Gunter, G. O., Newton
Hattaway, J. C., Edison
Hays, W. C., Colquit
Henry, J. H., Bainbridge
Holland, S. P., Blakely
Roberts, C. A., Leary
Sharp, C. K., Arlington
Sharp, C. M., Trudeau Sanatorium, Saranac Lake, N. Y.
Shepard, W. O., Bluffton
Simmons, B. K Blakely
Standifer, J. G., Blakely
Standifer, W. B., Blakely (Hon.)
Twitty, C. W., Elmodel
Tye, C. O., Edison
Ward, L. C., Damascus

TRI SOCIETY

(Liberty, Long, McIntosh Counties)

Officers

President ..... Armistead, I. G.
Sec'y.-Treas. ..... Gibson, B. H.

Members

Armistead, I. G., Warsaw
Baggs, D. W., Ludowici
Gibson, B. Harrison, Allenhurst

TROUP COUNTY

Officers

President ..... McCulloh, H.
Sec'y.-Treas. ..... McCulloh, H., Jr.
Delegate ..... Williams, C. O.

Members

Amis, Frank J., Jr., Hogansville
Avery, Maddin, LaGrange
Brock, B. H., Hogansville
Callaway, Enoch, LaGrange
Clark, W. H., LaGrange
Daniel, B. C., Hogansville
Hadaway, W. H., LaGrange
Hammett, H. H., LaGrange
Harvey, C. W., Hogansville
Herman, E. C., LaGrange
Lane, J. E., LaGrange
Lee, R. O., LaGrange
Morgan, D. E., LaGrange
McCall, W. R., LaGrange
McCulloh, Hugh, Jr., West Point
McCulloh, Hugh, West Point
O'Neal, Rance, West Point
O'Neal, R. S., LaGrange
Phillips, W. P., LaGrange
Poer, J. M., West Point
Slack, H. R., LaGrange
Taylor, J. C., LaGrange
Taylor, T. W., West Point
Vineyard, T. L., LaGrange
Williams, C. O., West Point
Williams, Virgil, Grantville

TURNER COUNTY

Officers

President ..... Rawlins, R. D.
Vice-President ..... Rogers, F. W.
Sec'y.-Treas. ..... Baxter, J. H.

Members

Baxter, J. H., Ashburn
Belflower, H. M., Sycamore
Rawlins, R. D., Rebecca
Rogers, F. W., Ashburn
Story, W. L., Ashburn
Turner, W. J., Ashburn

TWIGGS COUNTY

Member

Wood, A. J., Fitzpatrick

UPSON COUNTY

Officers

President ..... Harris, C. A.
Vice-President ..... McKenzie, J. M.
Sec'y.-Treas. ..... Carter, R. L.
Delegate ..... Adams, B. C.

Members

Adams, B. C., Thomaston
Barron, H. A., Thomaston
Bridges, B. L., Thomaston
Carter, R. L., Thomaston
Harris, C. A., The Rock
McKenzie, J. M., Thomaston
Pritchett, D. W., Thomaston
Williams, K. S., Thomaston
Wilson, Samuel, Yatesville
Woodall, F. M., Thomaston

WALKER COUNTY

Officers

President ..... Spearman, M. W.
Vice-President ..... Shields, J. A.
Sec'y.-Treas. ..... Hammond, J. H.
Delegate ..... Alsobrook, J. S.

Members

Alsobrook, J. S., Rossville
Coulter, R. M., LaFayette
Crowder, M. M., Kensington, R. F. D.
Elder, D. G., Chickamauga
Gardner, J. L., Sulphur Springs
Hale, B. C., Rossville
Hammond, D. W., LaFayette
Hammond, J. H., LaFayette
Hice, E. H., Rock Springs
Kitchens, S. B., LaFayette
Murphy, M. W., Ringgold
Rogers, W. D., Pittsburg
Shields, H. F., Chickamauga
Shields, J. A., LaFayette
Spearman, M. W., Chickamauga
Van Zandt, L. W., LaFayette
Wood, J. P., Kensington

WALTON COUNTY

Officers

President ..... Upshaw, H. L.
Sec'y.-Treas. ..... McClintic, J. K.

Members

Aycock, T. R., Monroe
Day, J. B. H., Social Circle
Floyd, Chas. S., Loganville
Lott, W. H., Monroe
McClintic, J. K., Monroe
Nunnally, H. B., Monroe
Pirkle, J. A., Monroe
Spearman, W. D., Social Circle
Upshaw, Harry L., Social Circle
Wells, G. R., Monroe

WARE COUNTY

Officers

President ..... Stephens, C. M.
Vice-President ..... Huey, H. G.
Sec'y.-Treas. ..... McCullough, K.
Delegate ..... Reavis, W. F.

Members

Atwood, Geo. E., Waycross
Bagley, J. B., Waycross
Bradley, D. M., Waycross
Bussell, B. R., Waycross
Campbell, J. A., Nahunta
Carswell, H. J., Waycross
DeLoach, A. W., Waycross
Dorminy, A. C., Hoboken
Fleming, A., Folkston

Folks, W. M., Waycross
Hafford, W. C., Waycross
Hawkins, L. M., Blackshear
Hendry, G. T., Blackshear
Hollingsworth, P. L., Waycross
Huey, H. G., Homerville
Johnson, R. L., Waycross
Latimer, J. H., Waycross
McCoy, W. R., Folkston
McCullough, K., Waycross
Minchew, B. H., Waycross
Mixson, W. D., Waycross
Penland, J. E., Waycross
Pomeroy, W. L., Waycross
Reavis, W. F., Waycross
Seaman, H. A., Waycross
Stephens, C. M., Waycross
Walker, J. L., Waycross (Hon.) (Deceased)
Walker, R. C., Waycross
Williams, W. P., Blackshear
Wilson, J. R., Homerville
Witmer, C. A., Waycross

WARREN COUNTY

Officers

President ..... Ware, F. L.
Vice-President ..... Ricketson, F. B.
Sec'y.-Treas. ..... McGahee, R. C.
Delegate ..... Davis, A. W.

Members

Davis, A. W., Warrenton
McGahee, Robt. C., Warrenton
Ricketson, F. B., Warrenton
Ware, F. L., Warrenton

WASHINGTON COUNTY

Officers

President ..... Taylor, R. L.
Vice-President ..... Overby, N.
Sec'y.-Treas. ..... Helton, B. L.
Delegate ..... Peacock, E. S.

Members

Burdett, J. R., Tennille
Dillard, J. B., Davisboro
Harbin, F. P., Tennille
Helton, B. L., Sandersville
Irwin, Andrew J., Sandersville
Jenkins, H. B., Sandersville
Joiner, B. O., Tennille
Lozier, N. H., Sandersville
Malone, Steve B., Sandersville
McMaster, D. E., Tennille
Mitchell, L. C., Sandersville
Newsom, N. J., Sandersville
Overby, N., Sandersville
Peacock, E. S., Harrison
Rawlings, F. B., Sandersville
Rogers, O. L., Sandersville
Taylor, Ralph L., Davisboro
Vickers, T. E., Wrightsville
Warthen, W. B., Davisboro
Wright, J. J. C., Doerun

WAYNE COUNTY

Officers

President ..... Tyre, J. L.
Vice-President ..... Ogden, I. K.
Sec'y.-Treas. ..... Gordon, A. J.
Delegate ..... Tyre, J. L.

Members

Colvin, J. T., Jesup
Gordon, A. J., Jesup
Ogden, D. H., Odum
Ogden, I. K., Odum
Ritch, T. G., Jesup
Rogers, D. J., Glennville
Tyre, J. L., Screven

WHITFIELD COUNTY

Officers

President ..... Bradley, R. S.
Vice-President ..... Rollins, J. C.
Sec'y.-Treas. ..... Shellhorse, E. O.
Delegate ..... Starr, Trammell

Members

Ault, H. J., Dalton
Bradley, R. S., Dalton
Broaddrick, G. L., Dalton
Erwin, H. L., Dalton
Greene, W. J., Ringgold
Kennedy, B. L., Dalton
Lacewell, J. F., Dalton (Hon.)
McAfee, J. B., Dalton
McAfee, J. G., Dalton
Rollins, J. C., Dalton
Shellhorse, E. O., Dalton
Starr, Trammell, Dalton
Steed, J. H., Dalton

WILKES COUNTY

Officers

President ..... Ellis, L. M.
Vice-President ..... Sale, H. M.
Sec'y.-Treas. ..... Harriss, H. T.
Delegate ..... Harriss, H. T.

Members

Casteel, L. R., Metasville
Ellis, L. M., Washington
Harriss, H. T., Washington
McNeill, R. J., Tignall
Ragsdale, E. W., Tignall
Sale, H. M., Rayle
Simpson, A. W., Washington
Simpson, R. A., Washington
Wills, C. E., Washington
Wood, O. S., Washington

WORTH COUNTY

Officers

Sec'y.-Treas. ..... Sumner, G. S.
Delegate ..... McCoy, H. S.

Members

Crumbley, J. J., Sylvester
Ford, E. D., Doles
McCoy, H. S., Sylvester
Sessions, W. W., Sumner
Sumner, G. S., Poulan
Tipton, W. C., Sylvester
Tracy, J. L., Sylvester

OBITUARY

(Continued from Page 568)

helpful service. We deplore his untimely death and sympathize with his family in their great loss.

That a copy of these resolutions be incorporated in the minutes of this society, a copy be sent to the Albany Herald and the original be delivered to Mrs. Davis.

Respectfully submitted,

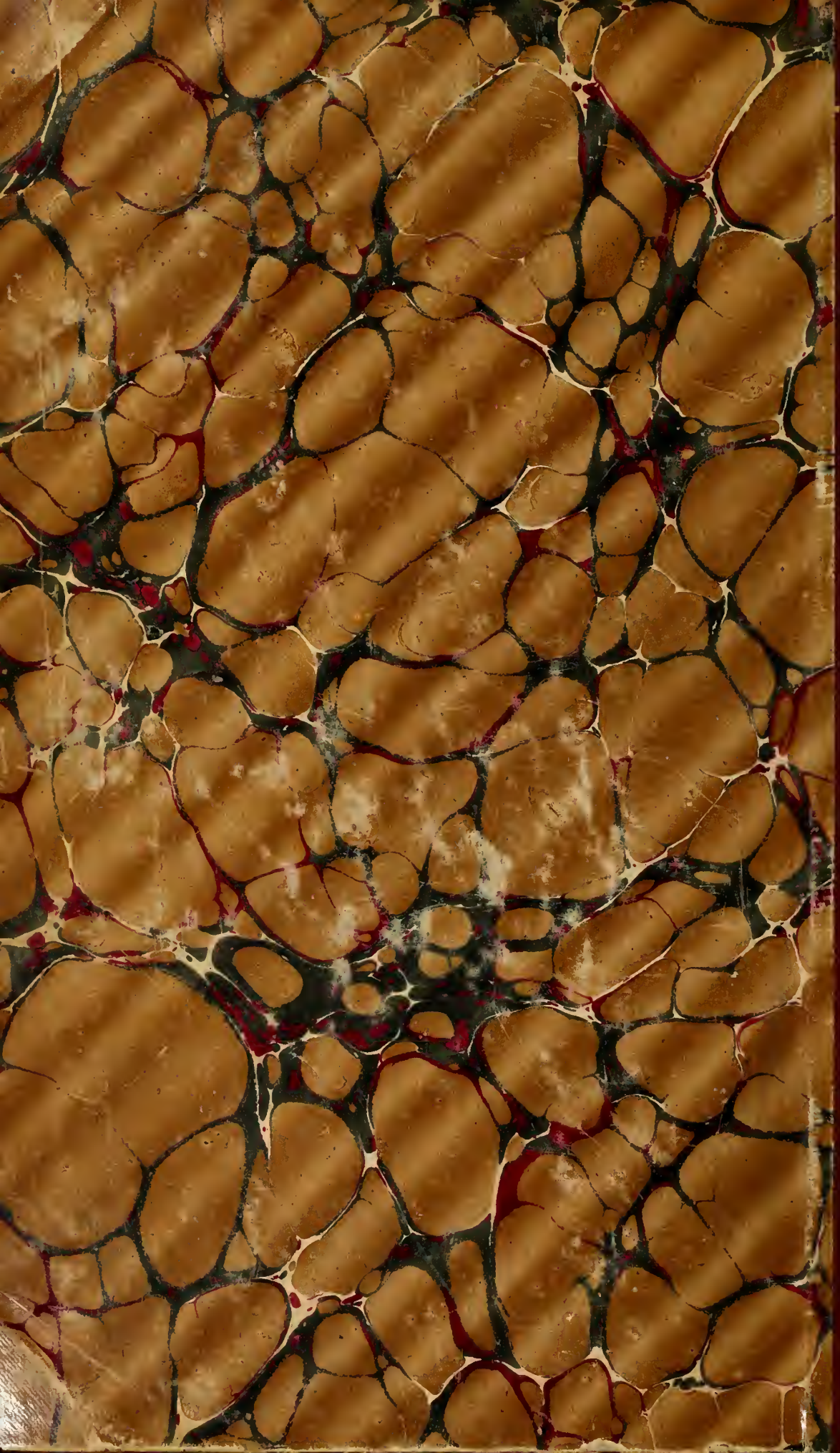
DOUGHERTY COUNTY MEDICAL SOCIETY.

Committee
J. A. REDFEARN, M.D.
I. W. IRVIN, M.D.
I. M. LUCAS, M.D.
Secretary-Treasurer.

Dr. Robert H. Twiggs, Hiawassee; University of Georgia Medical Department, Augusta, 1888; aged 72; died on October 31, 1929. He was a member of the Hiawassee Baptist Church. Dr. Twiggs had practiced in his home community for forty years and known extensively for his charitable work. He is survived by four brothers: J. V. and J. G. Twiggs, Hiawassee; Dennison Twiggs, Atlanta, and James P. Twiggs, Kennesaw. Funeral services were conducted from the Baptist Church by Rev. A. Carswell and interment in Osbornhill cemetery.

Dr. Clarence Lee Poole, Atlanta; Emory University School of Medicine, Atlanta, 1886; aged 65; died at his home on Ponce de Leon Avenue, November 1, 1929 from injuries sustained when struck by an automobile. He was a native of Laurens, South Carolina, but had made Atlanta his home for a number of years. Dr. Poole was prominent in social and professional circles. Surviving him are his widow, two daughters, Mrs. Fred H. Sorrow, Atlanta, and Mrs. Ruth Zachary, Athens. Dr. W. L. Bruen conducted the funeral services from the Spring Hill Methodist Church and the body carried to Cornelia for interment.

DR. HALL'S RADIUM CLINIC

Dr. O. D. Hall announces the opening of Hall's Radium Clinic, and the removal of his office to 106 Linden Avenue, N. E., Atlanta. Advertisement of the Clinic will appear in the next issue of this Journal.

41A
1397